
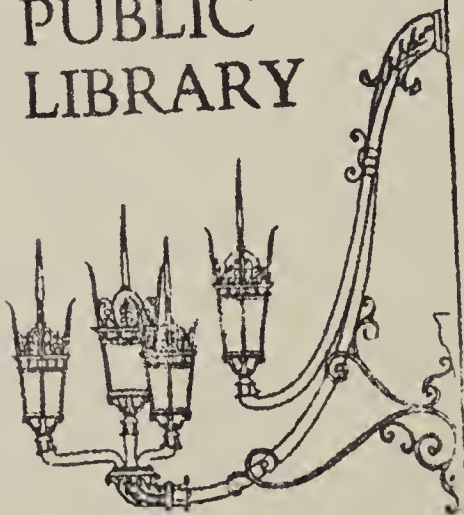


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Appendices To

BOSTON'S NEW EXPOSITION CENTER AND STADIUM

Interim Report

October 1994

Boston Redevelopment Authority

Revised and expanded
October 18, 1994

John Avault
Department of Policy Development and Research

The five technical appendices that follow differ slightly from those published as part of BOSTON'S NEW EXPOSITION CENTER AND STADIUM, Interim Report, released by Boston Mayor Thomas M. Menino and Chief Economic Development Officer Marisa Lago on October 12, 1994. The greatest difference is that all tables and charts that follow have been printed in a larger typeface, requiring more paper but causing less eye strain to the reader.

Appendix 2 has been expanded by the inclusion of an additional table on output, earnings, and employment originating from the on-site operations of the Exposition Center. Additional text describes this table and clarifies a few points about the use of economic multipliers.

Minor corrections have been made to the printing of some tables in Appendix 4. These corrections do not in any way affect the conclusions of the report.

Appendices 3 and 4 were produced by Kairos Shen and Bob Baldwin.

Greg Perkins and Robert Amatruda contributed to Appendix 2.

APPENDIX

- Appendix 1: Attendance Estimates for Exposition Center
- Appendix 2: Economic and Fiscal Impacts of Exposition Center: Construction Period, Year 2000 and Year 2010
- Appendix 3: Development Cost Comparison of C Street and Northern Avenue sites
- Appendix 4: Cost/Benefit Analysis
- Appendix 5: Hotel Demand Related to Major Exposition Center Events

Note: The purpose of the analyses presented in the Appendices is to estimate the attendance, occupancy, spending, employment, taxes and influence on the hotel market of the proposed Exposition Center. These estimates are not intended to represent goals or targets. Neither are they a "best case" that may not be surpassed, nor a "worst case" that guarantees a minimum performance level. The estimates presented here are intended to summarize the economic performance that a prudent investor might anticipate, based on a thorough and cautious examination of relevant data. Our results point out the complexities of the exposition industry and the importance of government and business cooperation and planning in determining the economic results. This is especially important for the establishment or recruiting of permanent location professional association meetings and trade shows.



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APPENDIX I:

ATTENDANCE ESTIMATES FOR BOSTON'S NEW
EXPOSITION CENTER

The issue of visitor attendance at Boston's new Exposition Center is central to both the determination of the optimal size of the facility and the estimation of the economic and fiscal benefits that will repay the public investment in construction cost and site opportunity cost. The first steps of this analysis are the identification of market segments among facility users and the determination of attendance and floor space relationships. These first steps involve the examination of national data on exposition events. The next steps are the identification of Boston's position in the national marketplace of exposition events and the estimation of actual attendance for relevant market segments. Once this has been done, the attendance estimates that result can serve as the starting point for the next analysis: Estimating the Economic and Fiscal Impacts of the Exposition Center, which is Appendix II.

MARKET SEGMENTS:

"Exposition events" are those meetings, conventions, demonstrations, trade shows, and exhibits that require the short-term use of a very large enclosed space. The most important division across these varied events divides the market into two segments: consumer shows and trade shows, as explained in the second chapter of the main report. Since consumer shows draw most of their attendance from the local metropolitan population, their economic impact is limited. They bring little new money into the regional economy from outside. Their usefulness and value is attested by the exhibitors and visitors that these events draw, but their economic impact is limited.

Trade shows and national meetings requiring significant exhibition space comprise the other major segment of exposition events. Many of these events are the annual meetings of professional or trade associations. Some are "conventions" that have evolved to include exhibits of the latest products or processes that are important to the profession or trade group that is meeting. In this sense, these conventions might properly be called "trade shows". Admission to these events is limited to business and professional groups whose members often travel from across the country to attend. Many attendees require hotel lodging, restaurant meals, and local stores and services during a stay that typically lasts three or four days. Even those attendees who live in the local metropolitan area may make some expenditures that represent "net new" economic stimulus to the state and regional economies. This is most likely to be the case when the expenditures are treated as business, rather than personal, expenses. It is this net new spending, particularly at hotels, that makes these events economically important. They bring new money into the local economy. This is the market segment that the following analysis focuses on, and it will be simply referred to as "trade shows" from this point on.

Some exposition events move to a different city each year, or rotate, while others return to the same place each year, as fixed or permanent events, as described in Chapter 2. This distinction is important to the attendance analysis because Boston's capture of market share in the fixed segment may take more time than is required by the rotating segment.

THE NATIONAL MARKET OF TRADESHOW EVENTS:

Most large exposition events in America are listed and described in the 1994 Tradeshow Week Databook, which is the source principal of data in this section, unless otherwise noted.

The tradeshow industry has seen a trend of increasing use of exhibition space at large meetings as event planners incorporate more exhibitors and materials into their programs and respond to new space resources created by newly developed exhibition facilities. Still, there are few events that require an exhibition hall larger than half a million gross square feet.

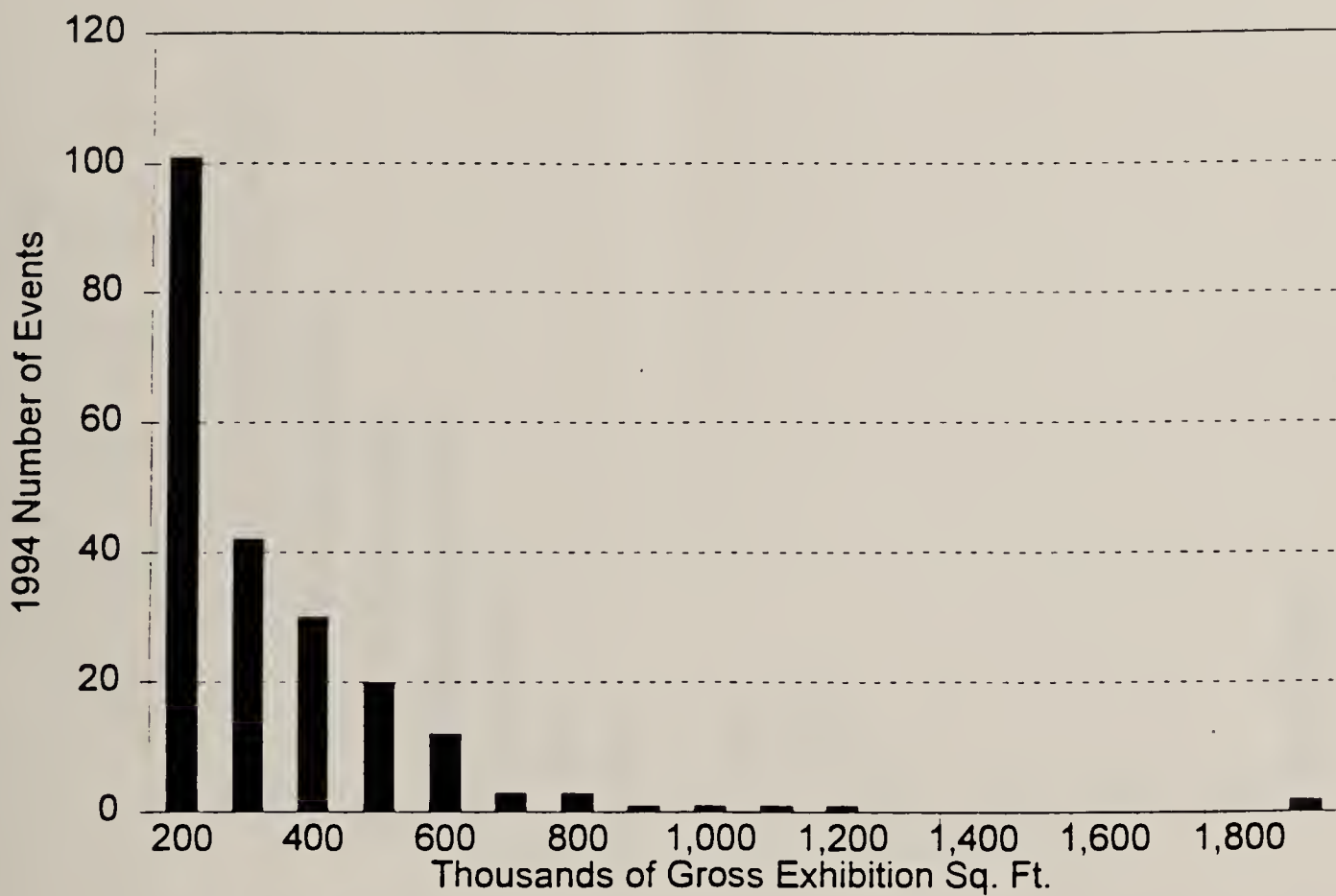
The Number of *National Rotating Trade Shows* distributed by Gross Exhibition Size is illustrated in the following graph. The graph shows that there were 101 such events scheduled for 1994 that utilized between 100,000 and just under 200,000 gross square feet of exhibition space. These are events that would require all or almost all of the exhibition floor space available at the Hynes Veterans Memorial Convention Center, which has 193,000 square feet of total gross exhibition space. Even though the Hynes Center can accommodate shows of this size in theory, it is important to include them in our analysis since Boston may be losing some business in this range due to the Hynes' layout (only 111,000 sq. ft. contiguous) and tight schedule. One step above this are 42 shows using between 200,000 and 299,999 gross square feet, and above this are 30 shows at 300,000 to 399,999 square feet, followed by 20 more shows that need up to one half million square feet. After the 12 shows using 500,000 to just under 600,000 square feet (half of these 12 requiring just 500,000 to 510,000 square feet and the largest only 560,000 g.s.f.) the number of events drops to a low level and adds just 12 more events between 600,000 and over 1.9 million gross square feet of space.

Attendance and Space Utilization Rates, measured by Attendance per Thousand Gross Square Feet, also show an important pattern across the range of space requirements, as shown in the next graph. The number of persons attending these events, per thousand gross square feet of exhibition space, drops steadily from over 100 persons for floor space requirements between 100,000 and 199,999 square feet, through 20 for 400,000 to 499,999 square feet, to 12 for 700,000 to 799,999 square feet of gross exhibition square feet. Although the graph indicates a break in this pattern at around one million square feet, the more intensive space utilization rates seen here represent individual events, and not averages for several shows. "Large" shows that require very large halls sometimes owe their size to expansive exhibits rather than to great attendance. The largest trade show listed in the 1994 Tradeshow Week Databook is the California Farm Equipment Show and International Exposition.

Taken together, the patterns of declining numbers of events and declining space utilization for attendance across ever larger venues explain the result depicted in the graph: *National Demand for Exposition Space*, which measures total national rotating trade show attendance by gross exhibition size. The 101 trade shows using from 100,000 and up to 200,000 gross square feet of exhibition space have an average attendance to floor space ratio of 102 persons per thousand square feet, and represent a total of 654,450 attendees. The next step up in floor space requirements finds 429,200 persons attending national rotating trade shows utilizing from 200,000 up to 300,000 square feet. Attendance continues to decline across the next three size levels, reaching 203,000 for trade shows needing from 500,000 up to 600,000 square feet, and then dropping further and more steeply .

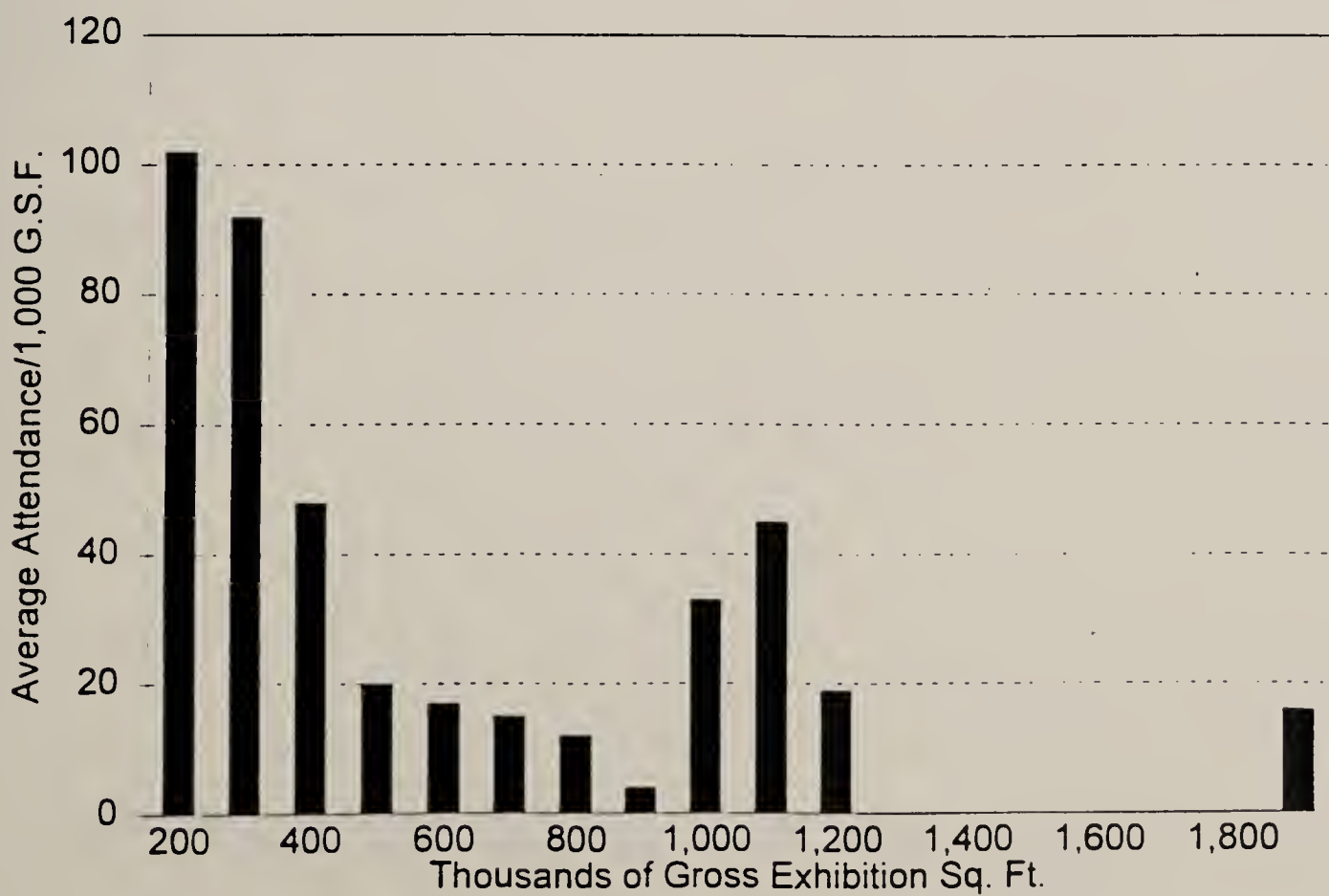
NATIONAL ROTATING TRADE SHOWS

Number of Shows by Gross Exhib. Size



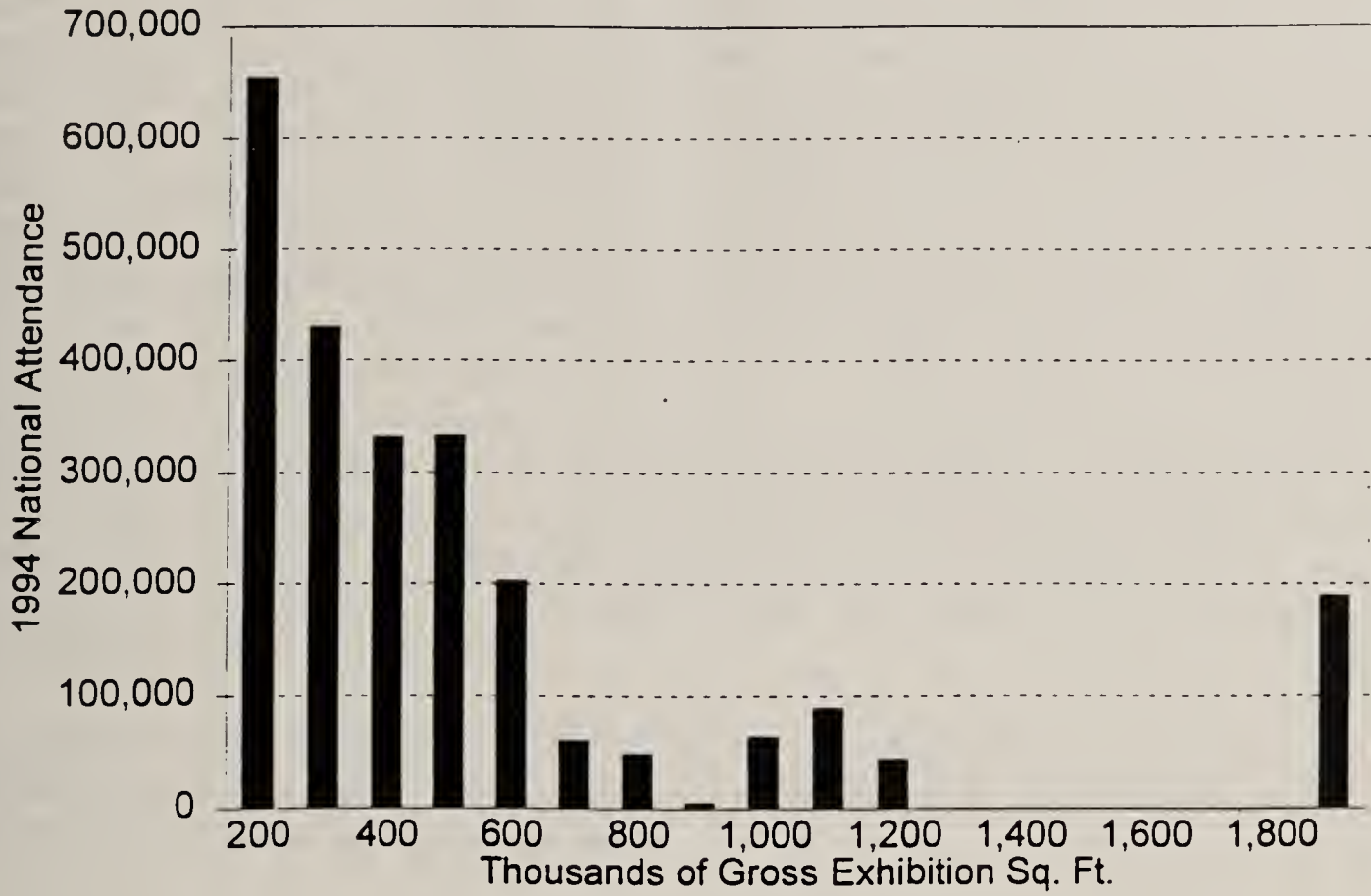
ATTENDANCE / SPACE UTILIZATION RATES

Attendance per Thousand G.S.F.



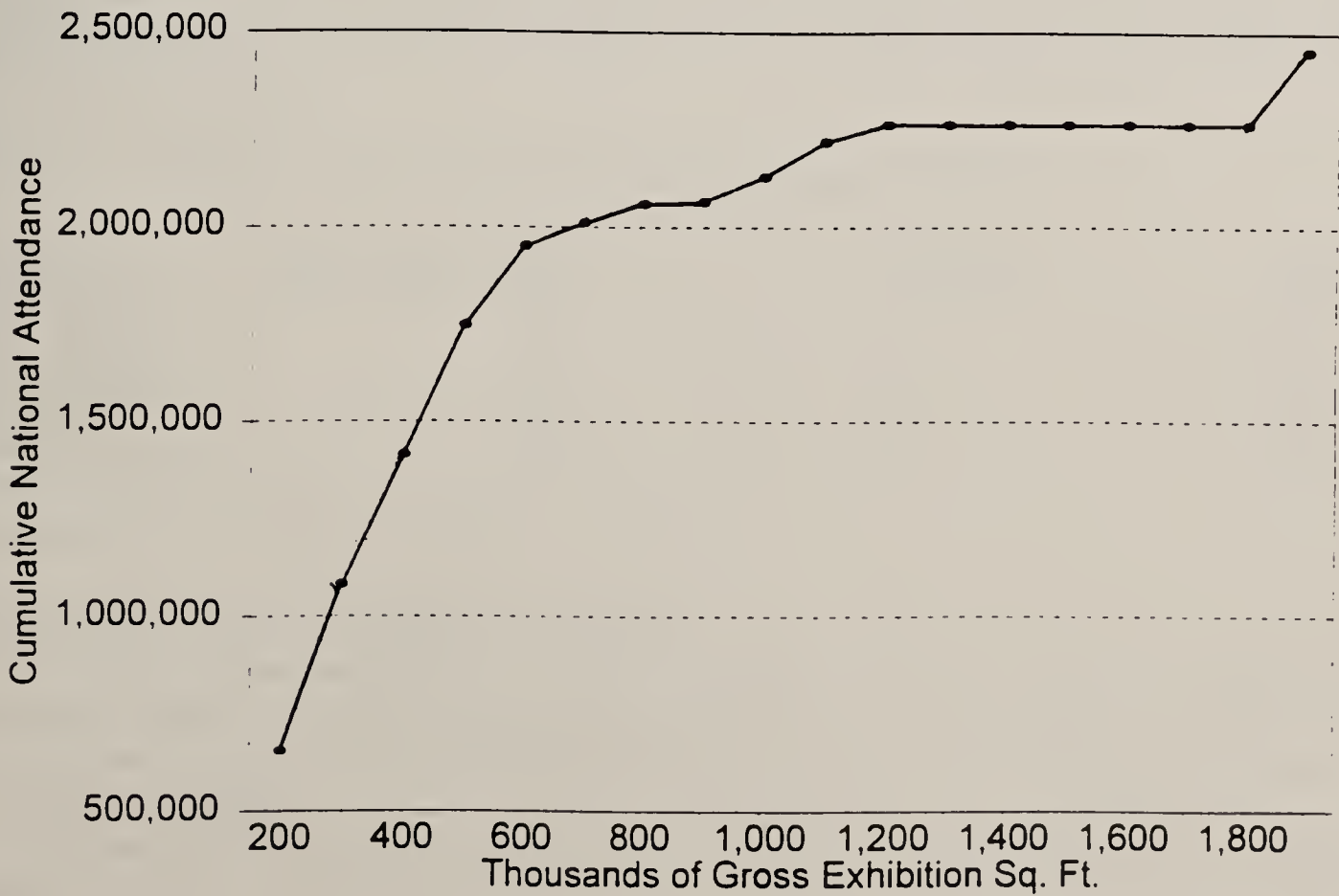
NATIONAL DEMAND FOR EXPOSITION SPACE

Attendance by Gross Exhibition Size



NATIONAL DEMAND FOR EXPOSITION SPACE

Potential Attendance & Facility Size



The fourth and final graph on this topic expresses these same figures in a different way to help us visualize the schedule by which an expanding exposition center can accommodate an increasingly large market of trade show attendees. *Potential Attendance and Facility Size* in the national market of rotating trade shows the cumulative growth in potential attendance for a exposition center that may be imagined to grow larger and larger by 100,000 gross square foot increments, beginning at just under 100,000 square feet. The first expansion, from 99,999 square feet to just short of 200,000 square feet, establishes the first point on the graph, marking the 654,450 persons expected to attend national rotating trade shows in this size range in 1994. The second expansion, up to 300,000 square feet, adds another 429,200 persons and brings the count of total potential attendees up to nearly 1.1 million persons. Cumulative potential attendance continues to rise steeply over the next two conceptual expansions, up to 500,000 square feet of gross exhibition space. Attendance increases then decelerate somewhat up to the 600,000 square feet level, at which point nearly two million attendees have been added to potential market available. Potential attendance growth then slows substantially beyond this level, rising by only another 179,000 over the next four size increments that bring the gross exposition space up to one million square feet.

This suggests that the range of 500,000 to 600,000 gross square feet of exhibition space may be an efficient size for Boston's new Exposition Center, especially if prime site opportunities are limited and development costs are expensive.

ROTATING VS. PERMANENT SHOWS:

While "Only 15% of the shows listed in Tradeshow Week Data Book relocate each year."(1994 Tradeshow Week Data Book, p.VIII), this "15% rotate" rule is a broad average that does not apply to the national trade shows that we are most concerned with. Almost all consumer shows are permanently located. They cannot rotate to different locations because they are designed to market products to a local population. This means that about 30% of trade shows rotate. True trade shows (admission restricted to members or professionals) number about half of Tradeshow Week Data Book listings.)

Examining the listings for large shows in the 1994 Data Book reveals:

<u>Gross Sq. Ft.</u>	<u>Total Trade Shows</u>	<u>Rotating</u>	<u>Rotating %</u>
200,000-380,000	143	73	51%
400,000-460,000	32	17	53%
470,000-600,000	45	18	40%
200,000-600,000	220	108	49%

Above 600,000 g.s.f. only 9 out of 30 (30%) rotate.

The market realities that these figures reflect are:

A) Larger shows tend to be truly national, and as such must rotate to meet the desires of members/attendees for both convenience and travel.

B) The largest shows have trouble rotating because of the scarcity of adequate venues and problems of logistics.

C) Many smaller shows are local or regional and do not have as much member pressure to rotate.

Non-rotating trade shows are not necessarily permanently fixed in their present location.

A) A show with no essential link to its present venue may relocate in response to new options (such as a new Boston facility of adequate size and quality).

B) A show may "metamorphose" through growth, sale, or member or management changes. This may be accompanied by a move to a new "permanent" location and perhaps a new name.

C) New shows are always being created or terminated, as well as transformed.

CONCLUSIONS:

National trade shows are the sub-market of exposition events that bring significant economic benefits to the host city and region by providing new opportunities for the "export" of hospitality and related services to visitors who inject new money into the local economy. Rotating trade shows constitute the most accessible part of this market but represent only half of all events in the size strata relevant to Boston's new Exposition Center. Estimates of attendance at economically significant shows should account for the inevitable and gradual evolution of large non-rotating trade shows in Boston's proposed new facility.

THE SHARE AND SIZE OF BOSTON'S TRADE SHOW MARKET:

The question of Boston's potential share of the national market of large rotating trade shows has been addressed by studies investigating the feasibility of a new exposition center. These studies by the firms Price Waterhouse and Coopers & Lybrand have been referred to in the first chapter of this report. Applying market share results determined through a survey conducted by Coopers & Lybrand to the picture of the national market described above, the following analysis estimates likely attendance at large rotating trade shows in Boston. Similar, but more conservative, parameters for the extent and timing of penetration into the market of fixed location shows complete the analysis of the national trade show market for Boston. The results concur with the general conclusions of these two earlier studies: that a moderately large exposition center in Boston could attract a significant number of new visitors to the city, and that the facility can attain an acceptably high occupancy rate.

RESULTS:

Attendance estimates begin with rotating trade shows. After rotating trade show attendance has been established for the 1994 base year, market and attendance growth are factored in to arrive at estimates for the anticipated first full year of operations, the year 2000. Finally, Boston's market share of fixed location or non-rotating shows is established along with a schedule for the gradual establishment of this sub-market, and attendance at fixed location events is factored into the total.

ROTATING TRADE SHOWS:

- 1) Cumulative national attendance at (1994) rotating events
using 200,000-560,000 g.s.f. (104 events)= 1,297,373
- 2) Times a factor representing Boston's market share
of large rotating trade shows x .085
- 3) Equals annual average attendance at 9 rotating events which

Hynes is too small to host.	=110,277
4) Plus attendance at 2 additional shows that require between 100,000-200,000 g.s.f. (Hynes maximum capacity)	+ 12,960
5) Yields a total "1994" Boston attendance at rotating trade shows that require a facility larger than Hynes	=123,237
6) Now allow for 6 years of 4% annually compounded growth	x 1.265
7) To arrive at estimated attendance at net new rotating trade shows at the proposed new exposition center for the operating year 2000.	=155,934

NOTES to the estimation of rotating trade show attendance:

1) Although the data have been presented in terms of 100,000 square foot increments, actual events falling within this largest stratum of 500,000 to 599,999 g.s.f. did not exceed 560,000. Furthermore, the real limiting factor determining the adequacy of a facility to accommodate large trade shows is its net square footage. A well designed and configured hall may attain an efficiency factor greater than the standard 50% ratio of net to gross space. Consequently, an exposition space of 550,000 gross square feet can suffice for events that might otherwise require up to 600,000 g.s.f.

2) The survey of potential exposition center event representatives conducted by Coopers & Lybrand concluded that Massachusetts falls within the rotation region for events larger than 200,000 g.s.f. on an average four year cycle. This survey further concluded that Boston might capture 34% of those events cycling within this region. Dividing this 34% by the 4 year rotation cycle yields the .085 market share factor.

4) Additional attendance at events requiring Hynes' full capacity:
 Since Hynes has only 111,000 g.s.f. of contiguous space available, the possibility exists that the lower utility of non-contiguous space and the inability to "double book" full facility shows may pose an effective constraint that prevents Boston from realizing its full share of business in this size range. This does in fact appear to be the case. The Coopers & Lybrand users survey referred to above indicated that shows requiring 50,001-100,000 n.s.f. (100,002-200,000 g.s.f.) observe a 6 year rotation to our region with a 35% preference for Boston within the region. This would indicate that Boston could host $35\%/6 = 5.8\%$ of the 101 rotating shows in this size category, or 6 shows. In fact, Boston was recorded as hosting only 4 such shows. We assume that an ample size new facility would allow for the capture of these two additional shows. Average attendance at these 101 shows in 1994 was 6,480.

6) This 4% growth rate is more conservative than some other estimates but still greater than some other reference benchmarks. Price Waterhouse (op. cit.) assumed a 6% annual growth in floor space demand, citing Tradeshow Week surveys that called for 5% growth annually in attendance and floor space demand for exposition events overall. Between 1984 and 1993 professional attendance at the "Tradeshow 200" largest shows grew by an average 3.4% annually, as reported by Tradeshow Week. For one reference point outside of the tradeshow industry, the Bureau of Labor Statistics of the U.S. Department of Labor projects 1.6% annual growth in national employment through the year 2005. If both the 4% growth in tradeshow attendance and the 1.6% growth in national employment hold true through the year 2010 when Boston's new Exposition Center reaches full capacity utilization, the ratio of tradeshow attendance to total employment will be 45% greater than it is today. This result does not seem unreasonable in view of the growing use of exhibition space for conventions and meetings and the growth of tradeshow activities in response to the availability of newly developed space. If there is no growth

in tradeshow attendance after the year 2010, the results of the present analysis will not be affected.

FIXED LOCATION OR NON-ROTATING TRADE SHOWS:

The other important segment of the national trade show market consists of "fixed" shows that will establish, relocate or grow into Boston.

Since this market will develop over time, as related in the section: "The National Market of Tradeshow Events" above, its simulation must allow for phased growth. The larger shows will need some time to plan and implement a Boston location, so we allow 15 years for this market to expand at a constant, non-compound rate. This 15 years will begin in 1995 with the announcement of exposition hall construction. By the year 2000, Boston will have gained one third (5 years/15 years) of its potential national market, adjusted for market growth.

While these estimates have adopted the 8.5% national market share for large rotating trade shows that Coopers and Lybrand derived from their user survey, it would be prudent to estimate fixed shows more conservatively. After Boston and other cities complete current or planned expansions, Boston's new hall will be one of 18 able to provide at least 500,000 g.s.f. of exhibition space, and one of 42 with over 200,000 g.s.f. Boston's share of national attendance at non-rotating shows may also be hindered by our non-central geography, Frost-Belt location, and high costs. Five percent seems reasonable, reflecting both the growing competition in the exposition center supply market and Boston's exceptional attractiveness to visitors.

The attendance characteristics of permanent shows are similar to those of rotating shows and many fixed shows evolve from rotating events. Their estimated attendance may be calculated by reference to the results for rotating shows outlined above.

The national market of fixed shows is slightly greater than that of rotating shows.	
(51% compared to 49%)	$51 / 49 = 1.04$
Boston's market share, 15 years after the announcement of project plans will be 5%, compared to a 8.5% share of rotating events.	$\times 5 / 8.5$
Combining these two factors, we get the attendance ratio for permanent shows/rotating shows	$= 61\%$
Multiplying growth-adjusted year 2000 attendance at rotating shows by this factor	$\times 155,934$
Results in year 2000 attendance at Boston's full "equilibrium share" of national fixed shows	$= 95,120$
But by year 2000 Boston is just one third through the 15 year maturity that began in 1995	$\times 1/3$
So that Boston's year 2000 attendance at non-rotating trade shows will be	$= 31,707$

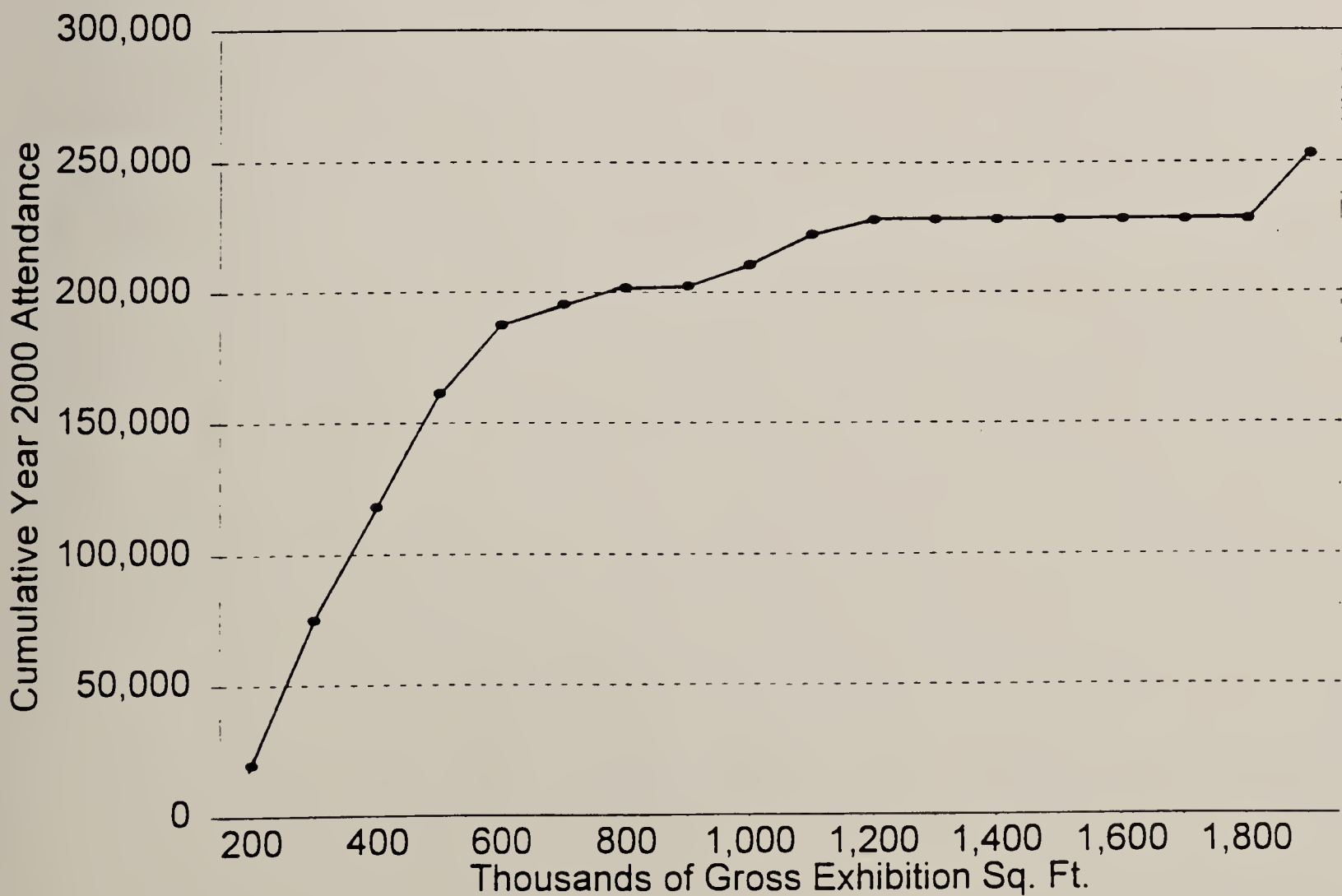
TOTAL ATTENDANCE:

	Rotating	Permanent	TOTAL
Year 2000:	155,934	31,707	187,641
Year 2005	189,718	77,152	266,870
Year 2010	230,820	140,800	371,621

Total potential attendance during the year 2000 at net new national trade shows that might take place in Boston's new Exposition Center is depicted in the following graph: *Boston Exposition Attendance*. The graph illustrates the relationship between the size of gross exposition space at Boston's new Exposition Center and the estimated net increase in national trade show attendance beyond the level now achieved by the Hynes Convention Center.

BOSTON EXPOSITION ATTENDANCE

Additional Visitors to New Facility



APPENDIX II:

ECONOMIC AND FISCAL IMPACTS OF BOSTON'S NEW
EXPOSITION CENTER: CONSTRUCTION PERIOD, YEAR
2000 AND YEAR 2010

ECONOMIC AND FISCAL IMPACTS OF THE OPERATION OF BOSTON'S NEW EXPOSITION CENTER:

Exposition and convention centers are widely regarded as economic engines that bring new money into local economies by increasing the "export" of hotel and visitor services to delegates and attendees to national and regional events. As with most economic stimuli that inject new money from outside the local economy, the spending by visiting attendees is believed to have a "multiplier effect" as new local wages and business receipts are re-spent on both business and consumer goods and services. This total new income, spending, and business generates new state and local taxes, so that the public investment in construction, operation, and site opportunity cost may be repaid. The tables that follow explore these issues for the proposed new Boston Exposition Center.

The first question in estimating the economic and fiscal impacts of exposition center operations is: "If you build it, who will come?" This was the topic of Appendix I. The next issue is the amount and type of spending that can be expected from these visitors. In order to have a positive economic effect, this spending must be made with "net new" money that would not have been spent without the exposition center. For this reason, the attendance estimates focused on out-of-town visitors who would not have been in Boston to patronize hotels and buy other local services and goods if it were not for the event being staged at the exposition center. Local residents who might attend "consumer shows" were not included in the attendance analysis because of the presumption that any spending that they do in conjunction with exposition events will be offset by reductions in other local expenditures. Local residents' spending will not be "net new", but will be redirected from other local purchases.

The table: *Economic Impact of Boston's New Exposition Center with 187,641 Delegates in Year 2000* shows the projected spending by national trade show attendees during the Center's first full year of operation. The figures in the top section of the table show the distribution and amount of total spending by each out-of-town visitor to a national trade show who spends the average 3.2 nights in a Boston hotel. The average delegate staying in a hotel will spend \$728 during their stay. The "total delegate spending" column sums the spending of all those 70% of attendees who are presumed to come from outside of the metropolitan area and stay in a local hotel. In addition, this total delegate spending column includes the amounts that would be spent by half of that 30% of attendees who do not stay at a hotel, but nonetheless make all other expenditures listed. Since these local attendees are professional or trade people making business expenditures, their spending here will not necessarily be offset with reduced personal spending elsewhere in the local economy, and this spending will count as "net new".

The bottom of this *Economic Impact...* table calculates the taxes that will be collected as this spending takes place. Most dollar figures are shown in constant dollars at 1994 prices; they are not adjusted to account for anticipated future inflation. Calculated tax receipts are presented in both constant dollar and current dollar (inflated) terms since the actual dollar amounts are relevant to budget matters such as construction bond repayment. Inflation is assumed to average 3% annually through the year 2000. A similar table presents these same results calculated for the year 2010, when Exposition Center occupancy and attendance are projected to reach capacity. Since most of this table is also expressed in 1994 constant dollars, these two tables differ only because of the greater number of visitors in 2010 and of course the inflated tax receipts have been subject to a longer period of inflation. Inflation is assumed to average 5% per year after the year 2000, which is close to the long term national average.

These *Economic Impact...* tables also incorporate the effects of the local multiplier in estimating total economic output and indirect tax revenues. Direct tax revenues are those collected at the

time that the exposition visitor makes his or her purchase, and this money comes from among those net new dollars that the attendee has brought to this event. Indirect tax revenues include the income and sales taxes that hotel workers and others serving or doing business with these visitors pay from their paychecks, which in turn come indirectly from this same attendee spending. Indirect taxes also include higher corporate tax collections as corporations enjoying this new delegate business make higher profits and pay higher taxes on these earnings. Additionally, indirect taxes contain the sales, income, and business taxes that result as wages and business receipts are spent and re-spent in the local economy. For example, hotels will purchase more contract services and supplies in the course of hosting their additional guests. Hotel workers will spend much of their paychecks locally, providing income to local stores and craftsmen.

The multipliers used for these calculations are published by the U.S. Dept. of Commerce, and they reflect the re-spending effects within the state of Massachusetts. The tables *Estimating Total Economic Impacts using Regional Multipliers...* describe this in detail. Please note that the total output, earnings, and employment recorded in these tables under the banner "Total Impact on Full Economy by Sector of Origin" refer to the sector where these jobs etc. originate, and not where they reside. For example, the tables show that about half of the total new jobs throughout the entire state economy derive from the initial spending made at hotels. This does not mean that half of all new jobs will be hotel workers. The jobs that originate with initial spending at hotels also include those whose customers are hotel businesses and hotel workers.

The employment, output, earnings, and tax collections that will flow both directly and indirectly from the off-site spending of new visitors to Boston's new Exposition Center have been shown in these first four tables just examined. These tables have provided snap shots for the year 2000, the first year of full operations, and for the year 2010, the first year of full occupancy. The table *BOSTON EXPOSITION CENTER ANNUAL PERFORMANCE and OFF-SITE TAX GENERATION* fills in attendance, occupancy, and tax collections for the intervening years. Taxes shown include all elastic taxes: hotel occupancy (both state and municipal), and state income, sales, and corporate tax levies. Potential property taxes from new hotels that might be built in response to increased demand from Exposition Center visitors is not included.

In addition to the off-site spending of Exposition Center visitors that has been the subject of the preceding analysis, the operation of the Exposition Center itself will produce jobs and income, both directly and indirectly. This is examined in the table: *EMPLOYMENT, ECONOMIC, AND FISCAL BENEFITS OF EXPOSITION CENTER OPERATIONS*. With wages and other employee compensation costing about \$9.06 (again, 1994 constant dollars) per square foot of gross exposition space (Coopers & Lybrand, op. cit.), the proposed 550,000 g.s.f. Exposition Center would have an employee compensation cost of nearly \$5 million for its first full year of operations in year 2000. This might be distributed among 200 or so full and part-time employees receiving an average of \$19,932 in annual pay and another \$4,983 in other compensation or benefits. The state income and sales tax returns to the state from this direct on-site income would be about \$237,769. The output of the Exposition Center, measured as its annual expenses of operation, is the starting point for estimating the multiplier effect, as shown in the bottom half of this table. After the initial year, employment is presumed to increase somewhat in partial response to increasing occupancy, as shown in the tables of Appendix IV.

The construction of the Exposition Center itself will also provide jobs and income to area construction workers, architects, etc.; and the spending and re-spending of their earnings will also generate a multiplier effect. Similarly, the construction of new hotels built in response to new trade show guests will boost construction jobs and earnings. And, of course, additional state tax collections follow quickly behind these new earnings. The last tables in this Appendix describe these economic and fiscal benefits of construction.

Economic Impact of Boston's New Exposition Center with 187,641 Delegates in Year 2000

All amounts in Constant Dollars at 1994 price levels unless otherwise noted.

Spending Category	Percent Share	Spending	
		Per Visitor	Year 2000 Total Delegate Spending
Hotel Room Lodging	51.0%	\$371.55	\$48,802,872
Hotel Restaurants	11.0%	\$80.14	\$12,781,705
Other Restaurants	11.4%	\$83.05	\$13,246,494
Hospitality Suites	5.2%	\$37.88	\$6,042,260
Entertainment	5.0%	\$36.43	\$5,809,866
Retail Stores *	8.2%	\$59.74	\$9,528,180
Local Transportation	4.3%	\$31.33	\$4,996,485
Other	3.9%	\$28.41	\$4,531,695
Total Direct Spending	100.0%	\$728.53	\$105,739,556
Multiplier			1.9631
Total Direct and Indirect Economic Output			\$193,553,312

Spending Category		Tax Rate	Taxes	
			\$1994\$ Dollars	2000\$ Dollars **
Hotel Room Lodging	State	5.7%	\$2,781,764	\$3,321,571
	Local	4.0%	\$1,952,115	\$2,330,927
Hotel Restaurants		5.0%	\$639,085	\$763,101
Other Restaurants		5.0%	\$662,325	\$790,850
Hospitality Suites	State	5.7%	\$344,409	\$411,242
	Local	4.0%	\$241,690	\$288,591
Entertainment		0.0%	\$0	\$0
Retail Stores		5.0%	\$476,409	\$568,857
Local Transportation		0.0%	\$0	\$0
Other		0.0%	\$0	\$0
Total Direct Tax Revenue Total			\$7,097,797	\$8,475,141
	State		\$4,903,991	\$5,855,622
	City		\$2,193,805	\$2,619,518
Indirect Taxes				
Income Tax			\$2,921,826	\$3,488,814
Corporate Tax			\$685,064	\$818,002
Sales Tax			\$694,157	\$828,860
Total Direct and Indirect Tax Revenue			\$11,398,844	\$13,610,816

Sources:

Percent spending for out-of-town visitors is based upon a survey by the International Association of Convention & Visitors Bureaus. Visitor spending is estimated by the Boston Redevelopment Authority using this percent spending and a daily hotel rate of \$116.11. Number of attendees is based on 13 events with an average crowd of 14,440.

Out-of-town visitors are assumed to be 70 % of the total and stay an average of 3.2 nights at hotels, making all expenditures shown. An additional 15 percent of all visitors make all non-lodging expenditures, which are also net increments to the state economy.

See the table: "ESTIMATING TOTAL ECONOMIC IMPACTS USING REGIONAL MULTIPLIERS" for notes on the multiplier and the estimation of "Indirect Taxes".

* Only the 25% of retail sales volume that is "margin" enters into the multiplier effect. The wholesale cost of goods is excluded.

**Tax yields inflated to year 2000 level assuming six years of 3% annual inflation (19.4%).

Economic Impact of Boston's New Exposition Center with 371,621 Delegates in Year 2010

All amounts in Constant Dollars at 1994 price levels unless otherwise noted.

Spending

Spending Category	Percent Share	Year 2010	
		Per Visitor	Total Delegate Spending
Hotel Room Lodging	51.0%	\$371.55	\$96,653,568
Hotel Restaurants	11.0%	\$80.14	\$25,314,030
Other Restaurants	11.4%	\$83.05	\$26,234,540
Hospitality Suites	5.2%	\$37.88	\$11,966,632
Entertainment	5.0%	\$36.43	\$11,506,377
Retail Stores *	8.2%	\$59.74	\$18,870,459
Local Transportation	4.3%	\$31.33	\$9,895,484
Other	3.9%	\$28.41	\$8,974,974
Total Direct Spending	100.0%	\$728.53	\$209,416,064
Multiplier			1.9631
Total Direct and Indirect Economic Output			\$383,330,272

Spending Category		Taxes		
		Tax Rate	\$1994\$ Dollars	2010\$ Dollars **
Hotel Room Lodging	State	5.7%	\$5,509,253	\$10,715,417
	Local	4.0%	\$3,866,143	\$7,519,591
Hotel Restaurants		5.0%	\$1,265,701	\$2,461,771
Other Restaurants		5.0%	\$1,311,727	\$2,551,290
Hospitality Suites	State	5.7%	\$682,098	\$1,326,671
	Local	4.0%	\$478,665	\$930,997
Entertainment		0.0%	\$0	\$0
Retail Stores		5.0%	\$943,523	\$1,835,138
Local Transportation		0.0%	\$0	\$0
Other		0.0%	\$0	\$0
Total Direct Tax Revenue Total			\$14,057,111	\$27,340,875
	State		\$9,712,303	\$18,890,287
	City		\$4,344,808	\$8,450,588
Indirect Taxes				
Income Tax			\$5,786,646	\$11,254,942
Corporate Tax			\$1,356,761	\$2,638,880
Sales Tax			\$1,374,771	\$2,673,910
Total Direct and Indirect Tax Revenue			\$22,575,289	\$43,908,607

Sources:

Percent spending for out-of-town visitors is based upon a survey by the International Association of Convention & Visitors Bureaus. Visitor spending is estimated by the Boston Redevelopment Authority using this percent spending and a daily hotel rate of \$116.11. Number of attendees is based on 25 events with an average crowd of 14,865.

Out-of-town visitors are assumed to be 70 % of the total and stay an average of 3.2 nights at hotels, making all expenditures shown. An additional 15 percent of all visitors make all non-lodging expenditures, which are also net increments to the state economy.

See the table: "ESTIMATING TOTAL ECONOMIC IMPACTS USING REGIONAL MULTIPLIERS" for notes on the multiplier and the estimation of "Indirect Taxes".

* Only the 25% of retail sales volume that is "margin" enters into the multiplier effect. The wholesale cost of goods is excluded.

**Tax yields inflated to year 2010 level assuming six years of 3% annual inflation 1994-2000 and then 5% annually to 2000 (94.5%)

ESTIMATING TOTAL ECONOMIC IMPACTS USING REGIONAL MULTIPLIERS FOR YEAR 2000
Annual Off-Site Business Attributable to the Boston's New Exposition Center

Spending Category	Initial Impact		Multipliers			Total Impact on Full Economy by Sector of Origin		
	Percent Share	187,641 Delegates Spending	Output Mult.	Earnings Mult.	Employment Mult.	Total Output	Total Earnings	Total Employment
Hotel Room Lodging	0.510	\$48,802,872	1.9709	0.5970	29.5597	\$96,185,581	\$29,135,315	1,443
Hotel Restaurants	0.110	\$12,781,705	1.9198	0.5809	32.9208	\$24,538,317	\$7,424,892	421
Other Restaurants	0.114	\$13,246,494	1.9198	0.5809	32.9208	\$25,430,619	\$7,694,888	436
Hospitality Suites	0.052	\$6,042,260	1.9709	0.5970	29.5597	\$11,908,691	\$3,607,229	179
Entertainment	0.050	\$5,809,866	1.9709	0.5970	29.5597	\$11,450,664	\$3,468,490	172
Retail Stores*	0.082	\$9,528,180	2.0819	0.8088	36.9712	\$4,959,179	\$1,926,598	88
Local Transportation	0.043	\$4,996,485	1.9510	0.7573	26.3711	\$9,748,141	\$3,783,838	132
Other	0.039	\$4,531,695	2.0593	0.7900	39.6428	\$9,332,120	\$3,580,039	180
Total Direct Spending	1.000	\$105,739,556						
Total Direct Economic Output*		\$98,593,422						
Composite Multiplier **			1.9631	0.6149	30.9280			
Total Direct and Indirect Economic Impact						\$193,553,312	\$60,621,289	3,049

NOTE: Initial Impact Spending refers to hotel and other off-site spending by the 70% of attendees making all expenditures and the 15% of attendees making only non-lodging expenditures, all incremental net gains to the state economy. Operations of the Exposition Center itself are not included.
* Only the 25% of Retail sales representing "margin" enters into the multipliers as "Direct Output". The wholesale cost of goods, trucking, etc. are "leakages from the system" that do not generate a local multiplier effect.

***Composite Multipliers" are derived by dividing Total Impacts for each column by Direct Output.

All multipliers are Total Multipliers, by Industry Aggregation, for Output, Earnings, and Employment, for the state of Massachusetts. (REGIONAL MULTIPLIERS: A User Handbook for the Regional Input-Output Modeling System (RIMS II), Second Edition, U.S. Dept. of Commerce, May 1992.)
The RIMS II Employment multiplier is expressed in terms of 1989 constant dollars in the 1992 Handbook. The employment multipliers shown on this table have been adjusted to 1994 price terms using the 1989-1994 U.S. fixed weight GDP deflator of 0.8618.

None of these multipliers will directly show the relationship between initial impact and total impact TAXES. However, the Earnings Multiplier does provide a key to total taxes collected after all initial, indirect, and induced effects have been realized. State income taxes produced by total earnings will be equal to the portion of earnings that is taxable after all exemptions and deductions (81% of gross income, on average, according to the Mass. Dept. of Revenue) times the personal income tax rate of 5.95%. Sales taxes paid out of earnings spent will be the 5% Mass. sales tax rate times the portion of earnings spent on taxable goods (22.9% of household income, as seen in the U.S. Bureau of Labor Statistics Consumer Expenditure Survey). Massachusetts state corporate revenues have averaged 1.13% of earned income over the long run.
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ESTIMATING TOTAL ECONOMIC IMPACTS USING REGIONAL MULTIPLIERS for YEAR 2010
Annual Business Attributable to the Boston's NewExposition Center (\$1994\$ Constant Dollars)

Spending Category	Year 2010			Multipliers			Total Impact on Full Economy by Sector of Origin		
	Percent Share	371,621 Delegate Spending	Delegat	Output Mult.	Earnings Mult.	Employment Mult.	Total Output	Total Earnings	Total Employment
Hotel Room Lodging	0.510	\$96,653,568		1.9709	0.5970	29.5597	\$190,494,517	\$57,702,180	2,857
Hotel Restaurants	0.110	\$25,314,030		1.9198	0.5809	32.9208	\$48,597,874	\$14,704,920	833
Other Restaurants	0.114	\$26,234,540		1.9198	0.5809	32.9208	\$50,365,070	\$15,239,644	864
Hospitality Suites	0.052	\$11,966,632		1.9709	0.5970	29.5597	\$23,585,035	\$7,144,079	354
Entertainment	0.050	\$11,506,377		1.9709	0.5970	29.5597	\$22,677,919	\$6,869,307	340
Retail Stores*	0.082	\$18,870,459	*	2.0819	0.8088	36.9712	\$9,821,602	\$3,815,607	174
Local Transportation	0.043	\$9,895,484		1.9510	0.7573	26.3711	\$19,306,090	\$7,493,850	261
Other	0.039	\$8,974,974		2.0593	0.7900	39.6428	\$18,482,164	\$7,090,230	356
Total Direct Spending	1.000	\$209,416,064							
Total Direct Economic Output*		\$195,263,220	*						
Composite Multiplier **				1.9631	0.6149	30.9280			
Total Direct and Indirect Economic Impact							\$383,330,272	\$120,059,817	6,039

NOTE: Initial Impact Spending refers to hotel and other off-site spending by the 70% of attendees making all expenditures and the 15% of attendees making only non-lodging expenditures, all incremental net gains to the state economy. Operations of the Exposition Center itself are not included.
* Only the 25% of Retail sales representing "margin" enters into the multipliers as "Direct Output". The wholesale cost of goods, trucking, etc. are "leakages from the system" that do not generate a local multiplier effect.
**"Composite Multipliers" are derived by dividing Total Impacts for each column by Direct Output.

All multipliers are Total Multipliers, by Industry Aggregation, for Output, Earnings, and Employment, for the state of Massachusetts. (REGIONAL MULTIPLIERS: A User Handbook for the Regional Input-Output Modeling System (RIMS II), Second Edition, U.S. Dept. of Commerce, May 1992.)

The RIMS II Employment multiplier is expressed in terms of 1989 constant dollars in the 1992 Handbook. The employment multipliers shown on this table have been adjusted to 1994 price terms using the 1989-1994 U.S. fixed weight GDP deflator of 0.8618.

None of these multipliers will directly show the relationship between initial impact and total impact TAXES. However, the Earnings Multiplier does provide a key to total taxes collected after all initial, indirect, and induced effects have been realized. State income taxes produced by total earnings will be equal to the portion of earnings that is taxable after all exemptions and deductions (81% of gross income, on average, according to the Mass. Dept. of Revenue) times the personal income tax rate of 5.95%. Sales taxes paid out of earnings spent will be the 5% Mass. sales tax rate times the portion of earnings spent on taxable goods (22.9% of household income, as seen in the U.S. Bureau of Labor Statistics Consumer Expenditure Survey). Massachusetts state corporate revenues have averaged 1.13% of earned income over the long run.

BOSTON EXPOSITION CENTER ANNUAL PERFORMANCE and OFF-SITE TAX GENERATION

Year	ATTENDANCE			OCCUPANCY		TAXES	
	Rotating	Fixed	TOTAL	Occ.Sq.Ft.Days	Rate	\$1994\$	Inflated
2000	155,934	31,707	187,641	46,450,000	26%	\$11,398,844	\$13,610,816
2001	162,171	39,570	201,742	49,940,588	28%	\$12,255,435	\$15,365,312
2002	168,658	48,012	216,670	53,636,102	30%	\$13,162,316	\$17,327,434
2003	175,405	57,066	232,470	57,547,353	33%	\$14,122,138	\$19,520,534
2004	182,421	66,767	249,188	61,685,686	35%	\$15,137,686	\$21,970,505
2005	189,718	77,153	266,870	66,063,010	38%	\$16,211,882	\$24,706,049
2006	197,306	88,263	285,569	70,691,822	40%	\$17,347,795	\$27,758,974
2007	205,199	100,138	305,337	75,585,239	43%	\$18,548,640	\$31,164,526
2008	213,406	112,822	326,229	80,757,023	46%	\$19,817,798	\$34,961,747
2009	221,943	126,361	348,304	86,221,612	49%	\$21,158,810	\$39,193,881
2010	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$43,908,575
2011	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$46,104,004
2012	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$48,409,204
2013	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$50,829,664
2014	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$53,371,147
2015	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$56,039,704
2016	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$58,841,690
2017	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$61,783,774
2018	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$64,872,963
2019	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$68,116,611
2020	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$71,522,442
2021	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$75,098,564
2022	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$78,853,492
2023	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$82,796,166
2024	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$86,935,975
2025	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$91,282,774
2026	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$95,846,912
2027	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$100,639,258
2028	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$105,671,221
2029	230,820	140,802	371,621	91,993,663	52%	\$22,575,273	\$110,954,782
TOTAL	5,334,466	2,859,894	8,194,330			\$497,790,431	\$1,697,458,697

NOTE: Occupancy includes major national/regional trade shows ONLY, both rotating and fixed location.
 Consumer shows attended by local residents are not included in these figures.
 Occupancy rates are calculated against the standard of a 320 day full occupancy year.
 Inflation is assumed to average 3%/yr. 1994-2000 and 5% thereafter.

On-Site Jobs, Wages, Taxes

EMPLOYMENT, ECONOMIC, AND FISCAL BENEFITS of EXPOSITION CENTER OPERATIONS

	<u>\$1994\$</u>		<u>\$2000\$ inflated</u>	
	<u>AVERAGE</u>	<u>TOTAL</u>		
DIRECT ON-SITE:				
Wages/gsf (\$1994\$)	\$ 9.06		\$ 10.82	
GSF		550,000		
Total Wages (\$1994)		\$ 4,983,000	\$ 5,949,963	
Number Jobs		200		
Total Compensation	\$ 24,915	\$ 4,983,000	\$ 29,750	\$ 5,949,963
Pay (80%)	\$ 19,932	\$ 3,986,400	\$ 23,800	\$ 4,759,970
Benefits (20%)	\$ 4,983	\$ 996,600	\$ 5,950	\$ 1,189,993
Income Tax	\$ 961	\$ 192,125	\$ 1,147	\$ 229,407
Sales Tax	\$ 228	\$ 45,644	\$ 273	\$ 54,502
TOTAL Tax from On-Site Wage	\$ 1,189	\$ 237,769	\$ 1,420	\$ 283,908

INDIRECT from ON-SITE OPERATIONS:	YEAR 2000 OPERATIONS		(all amounts \$2000\$ inflated)	
	<u>Output</u>	<u>Earnings</u>	<u>Jobs</u>	<u>Mean Earnings</u>
Initial Output (Expenses):	\$ 19,326,000	\$ 19,326,000	\$ 19,326,000	
Multiplier *	1.9709	0.597	24.8	
Total Impact	\$ 38,089,613	\$ 11,537,622	478	\$ 24,116
Excluding Initial	\$ 19,326,000	\$ 4,759,970	200	
= Indirect	\$ 18,763,613	\$ 6,777,652	\$ 278	\$ 24,344

Taxes from Indirect:		
Income	\$	326,649
Sales	\$	77,604
Corporate	\$	76,587
TOTAL	\$	480,841

TOTAL YEAR 2000 STATE TAXES FROM EXPOSITION CENTER ANNUAL OPERATIONS:

Direct	\$	283,908
Indirect	\$	480,841
TOTAL	\$	764,749

* Multipliers used are those for hotels, lodging places, and amusements; RIMS II, op.cit.

Employment and Fiscal Benefits Generated by the Construction of Exposition Center

Construction Costs (\$000s at 1994 prices):		
Convention Center	\$271,809,500	Exposition Center and Parking
at C Street Site	\$43,930,100	Foundation
	\$2,150,000	Infrastructure: New and Relocations
Total Hard Costs	\$317,889,600	
Soft Costs (business/professional service	\$51,857,900	
Acquisition, business relocation,continge	\$68,221,500	
Total Development Cost	\$437,969,000	
Construction jobs and wages		
Payroll (\$000s):	\$79,472,400	25 percent of hard costs
Jobs	2,271	full-time-equivalent, year-long, averaging \$35,000
Massachusetts State Taxes:		
Construction materials	\$0	5 percent tax on materials does not apply to public projects
Construction Worker payroll	\$3,830,172	5.95 percent tax on 81 percent of payroll (Mass. Dept. Revenue, Statistics of In
Worker spending sales tax	\$909,959	5 percent sales tax on the 22.9 percent of worker income spent on taxable item
Corporate Tax	\$898,038	(U.S. Dept. of Labor, B.L.S., Boston Metro Consumer Expenditure Survey)
Total Direct State Taxes from "Hard Cost	\$5,638,169	Mass. corporate tax revenues average 1.13 percent of earned income annually
Direct plus Indirect Employment, Earnings, and Taxes:		
Related to Hard Construction Costs:		
Total Impact employment	7,397	Full time and part time jobs, including direct construction jobs
Total Impact earnings	\$220,742,538	Includes construction workers,supplier companies, and those they support through their spending. (Average earnings \$29,843)
Related to "Soft Cost" Business Services:		
Total Impact employment	1,461	75% of "Soft Costs" are assumed to be locally produced business and professi
Total Impact earnings	\$34,521,804	services, creating both direct and indirect jobs, earnings, and taxes.
Total Impact:		
Income tax	\$12,302,465	Taxes calculated as above, all Economic Multipliers are from the
sales tax	\$2,922,777	U.S. Dept. Commerce "RIMS II" Handbook.
corporate tax	\$2,884,487	The employment multiplier has been adjusted from \$1989 to \$1994
		using the U.S. implicit price deflator for fixed weight G.D.P. (.8618)
Total Direct and Indirect	\$18,109,729	One time, over the four year construction period
State Taxes		

The Economic and Fiscal Impacts of Construction of 1,646 New Hotel Rooms

Number of New Hotel Rooms to be Constructed 1,646
 Hard Construction Cost @ \$70,000/Room: \$115,220,000
 Total Development Cost @ \$100,000/Room: \$164,600,000

Exclusive of site value or land costs.

Construction Employment, Earnings, and Taxes:

Construction jobs & wages
 Payroll (\$000s): \$28,805,000
 Jobs 823
 25 percent of hard costs
 full-time-equivalent, year-long, averaging \$35,000

Massachusetts State Taxes:

Construction materials \$1,440,250
 Construction Worker payroll \$1,388,257
 Worker spending sales tax \$329,817
 Corporate Tax \$325,497
 Total Direct State Taxes from "Hard Costs" \$3,483,821

5 percent tax on materials costing 25 percent of hard costs
 5.95 percent tax on 81 percent of payroll (Mass. Dept. Revenue, Statistics of Income)
 5 percent sales tax on the 22.9 percent of worker income spent on taxable items
 (U.S. Dept. of Labor, B.L.S., Boston Metro Consumer Expenditure Survey)
 Mass. corporate tax revenues average 1.13 percent of earned income annually

Indirect Employment, Earnings, and Taxes from "Hard Costs":

Total Impact employment 2,681
 Total Impact earnings \$80,008,768

Full time and part time jobs, including direct construction jobs.
 Includes construction workers and those supported by their

wages, and by construction firm suppliers. (Average earnings \$29,843)

Related to "Soft Cost" Business Services:

Total Impact employment 696
 Total Impact earnings \$21,914,844

50% of "Soft Costs" are assumed to be locally produced business and professional services, creating both direct and indirect jobs, earnings, and taxes.
 Earnings average \$31,497 per job.

Total Economic Impact:

Income tax \$4,912,208
 sales tax \$1,167,025
 corporate tax \$1,151,737
 plus Construction materials sales tax \$1,440,250

Taxes calculated as above, all Economic Multipliers are from the U.S. Dept. Commerce "RIMS II" Handbook, second edition.

The employment multiplier has been adjusted from \$1989 to \$1994 using the U.S.G.D.P. deflator 1989-1994 (0.8618)

Total Direct and Indirect States Taxes

\$8,671,221

One time, over the construction period.

Source: Boston Redevelopment Authority Research Department

The Economic and Fiscal Impacts of Construction of 3,259 New Hotel Rooms

Number of New Hotel Rooms to be Construct 3,259
 Hard Construction Cost @ \$70,000/Room: \$228,130,000
 Total Development Cost @ \$100,000/Room: \$325,900,000

Exclusive of site value or land costs.

Construction Employment, Earnings, and Taxes:

Construction jobs & wages
 Payroll (\$000s): \$57,032,500
 Jobs 1,630
 25 percent of hard costs
 full-time-equivalent, year-long, averaging \$35,000

Massachusetts State Taxes:

Construction materials \$2,851,625
 Construction Worker payroll \$2,748,681
 Worker spending sales tax \$653,022
 Corporate Tax \$644,467
 Total Direct State Taxes from "Hard Costs" \$6,897,796

5 percent tax on materials costing 25 percent of hard costs
 5.95 percent tax on 81 percent of payroll (Mass. Dept. Revenue, Statistics of Income)
 5 percent sales tax on the 22.9 percent of worker income spent on taxable items
 (U.S. Dept. of Labor, B.L.S., Boston Metro Consumer Expenditure Survey)
 Mass. corporate tax revenues average 1.13 percent of earned income annually

Indirect Employment, Earnings, and Taxes from "Hard Costs":

Total Impact employment 5,308
 Total Impact earnings \$158,413,472

Full time and part time jobs, including direct construction jobs.
 Includes construction workers and those supported by their

wages, and by construction firm suppliers. (Average earnings \$29,843)

Related to "Soft Cost" Business Services:

Total Impact employment 1,378
 Total Impact earnings \$43,390,326

50% of "Soft Costs" are assumed to be locally produced business and professional services, creating both direct and indirect jobs, earnings, and taxes.
 Earnings average \$31,497 per job.

Total Economic Impact:

Income tax \$9,725,934
 sales tax \$2,310,653
 corporate tax \$2,280,383
 plus Construction materials sales tax \$2,851,625

Taxes calculated as above, all Economic Multipliers are from the U.S. Dept. Commerce "RIMS II" Handbook, second edition.

The employment multiplier has been adjusted from \$1989 to \$1994 using the U.S.G.D.P. deflator 1989-1994 (0.8618)

Total Direct and Indirect States Taxes

\$17,168,595

One time, over the construction period.

Source: Boston Redevelopment Authority Research Department

Appendix 3

Development Cost Comparison of the C Street and Northern Avenue Sites

There is a substantial difference in the total development cost of an exposition center constructed on C Street and one constructed on Northern Avenue. In both cases, costs are based on the construction of a facility with a total of 1.44 million square feet containing exhibition space of 550,000 square feet. For an exposition facility of this size, the total development cost at C Street is \$437.9 million; the total development cost at Northern Avenue is \$555.6 million. The difference is \$117.7 million. (See Tables 1 and 2.)

Infrastructure Costs

A large part of the cost difference, over \$77 million, is attributable to the need to provide new infrastructure as well as to relocate existing infrastructure at the Northern Avenue site. For example, about \$75 million has been allocated for the extension of the South Boston Transitway from the World Trade Center to the end of Northern Avenue. While this extension is not absolutely essential, it would greatly improve transit access to the new exposition center as well as to the Boston Marine Industrial Park and the area in general. Moreover, the extension could include a underground turnaround at the terminus to accommodate a future upgrade of the bus transitway to light rail. Even if the Transitway were not extended, it would nonetheless have to be partially relocated at a substantial cost if the Northern Avenue site was developed for the exposition center. In general, the infrastructure issues involved at Northern Avenue are more complex than at C Street because both the Haul Road and the Third Third Harbor Tunnel cut through the former. The adjacency to the tunnel may present many complications and hidden costs.

Foundation and Hard Costs

There are significant foundation costs at both sites. While the soil condition is poor throughout the Fort Point Channel District, there is substantial geological difference between the sites that requires different strategies for the foundation, causing an impact on the overall cost of construction.

At C Street, the vertical distance from the surface to structurally sound geological material is approximately 40 feet. Excavation to this level would eliminate the need for piles and also provide underground parking beneath the entire footprint of the facility. The main cost will be in the treatment and removal of all the excavated fill and clay material and the construction of perimeter walls. The result of this excavation is a foundation for the building and underground parking for 3,000 spaces, at a cost of \$43 million.

The depth of fill and clay at Northern Avenue, which is much greater than at C Street, will require 150 foot deep piles to anchor the foundation to bedrock. The smaller building footprint and the presence of the Third Harbor Tunnel limits excavation, thus accommodating only 1,918 spaces underground. An additional 1,082 spaces would have to be provided in a separate, on-site garage south of the Haul Road.

The cost of excavation at C Street is nearly the same as the cost of the piles at Northern Avenue, thus balancing out. However, the cost of the additional parking garage to provide the balance of the necessary 3,000 spaces at Northern Avenue will add an additional \$21 million to overall construction cost.

Economic and Fiscal Impacts, and Opportunity Costs

Tables 1 and 2 summarize the actual additional cost to develop the project, but does not tabulate the negative economic and fiscal impacts in the event the current uses on the two sites have to be displaced. C Street generates more in property taxes because of the high percentage of privately-owned parcels, but has very little other impact on city revenue. Even though Northern Avenue generates only about 45% as much in property tax, it includes major city-owned buildings within the Boston Marine Industrial Park that generate substantial income.

Although relocation costs represent a small monetary cost of the entire project, the hardship experienced by affected businesses and the potential loss of jobs must also be considered. While 14 businesses with approximately 284 employees would be relocated from C Street, the Northern Avenue site would involve the displacement of 39 businesses with approximately 852 employees.

TABLE 1**SUMMARY OF PROJECT COSTS FOR C STREET**

(1994 Dollars)

COST ITEM	Land Acres	Building SF	Employees	Percent	COST
Acquisition Cost of Private Property	27.83	275,716			26,443,500
Value of Public Property	1.73	0			540,800
Business Relocation Cost		271,800	284		1,421,800
Infrastructure Relocation					1,000,000
Foundation		1,187,300			43,930,100
New Public Infrastructure					1,150,000
Facility Hard Construction Cost		1,440,000			271,809,500
Soft Costs					51,857,900
Contingency				10%	39,815,400
TOTAL PROJECT COST					437,969,000

TABLE 2**SUMMARY OF PROJECT COSTS FOR NORTHERN AVENUE**

(1994 Dollars)

COST ITEM	Land Acres	Building SF	Employees	Percent	COST
Acquisition Cost of Private Property	5	156,999			6,031,000
Value of Public Property	26	481,799			27,672,500
Business Relocation Cost		531,873	852		2,927,400
Infrastructure Relocation					4,200,000
Foundation		1,015,950			44,701,800
New Public Infrastructure					75,000,000
Facility Hard Construction Cost		1,440,000			280,512,500
Soft Costs					64,053,700
Contingency				10%	50,509,900
TOTAL PROJECT COST					555,608,800

TABLE 4

BREAKDOWN OF PROJECT COSTS FOR NORTHERN AVENUE

INFRASTRUCTURE RELOCATION	Linear Feet	Square Feet	Cost/Unit	Relocation Cost	Allowance	Replace (Y/N)	COMMENTS	COST TO PROJECT
Power Lines	2,000				1,200,000	Y	115 KVA line to be relocated from Haul Rd	\$1,200,000
Water & Sewer Lines					1,000,000	Y	30" diameter sewer pipe to be relocated	\$1,000,000
Gas Lines							None	\$0
Commercial Rail					2,000,000	N	Rail along Haul Rd must remain; 22' clearance above	\$0
Haul Road						Y	Terminus moved to Summer St; no Summer St entry to MHP	\$2,000,000
Public Roads						N	Trilling Way is eliminated	\$0
Public Transport Rail							None	\$0
Public Parking							None taken	\$0
Sub Total								\$4,200,000

FOUNDATION	SF	Cost/SF	Cost	Pile Depth	COMMENTS	PROJECT
Piles	1,015,950	\$20.00	\$20,319,000	150	500 lbs per square foot loading	\$20,319,000
Excavation & Foundation	1,015,950	\$24.00	\$24,382,800		Assumes 50% contaminated soil; includes structure for underground parking	\$24,382,800
Sub Total						\$44,701,800

NEW PUBLIC INFRASTRUCTURE	LF	Cost/LF	Fixed Cost	Total Cost	COMMENTS	COST TO PROJECT
MIRA - Rail Extension	1,750			75,000,000	Extend transitway, add new station, New turnaround required, MPA estimate	\$75,000,000
Vehicle Access Improvements	0		0	0	None required	\$0
Pedestrian Access - Sidewalks	0		0	0	Extension of transitway eliminates pedestrian requirement	\$0
- Bridges	0		0	0	None required	\$0
Truck Access	0		0	0	None required	\$0
Water & Sewer	0		0	0	None required	\$0
Sub Total						\$75,000,000

FACILITY CONSTRUCTION	SF	Cost/SF	Fixed Cost	Total Cost	Number of Spaces	Cost/Space	Total Cost	COMMENTS	COST TO PROJECT
Exposition Center Hard Construction	1,440,000	\$175.00		\$252,000,000	1,000	15,000	15,000,000	Includes support facilities and furnishings	\$252,000,000
Stand Alone Parking Structure	300,000	\$50.00		\$15,000,000				300 SF per space	15,000,000
Underground Parking Fit-up	767,500	\$15.00		\$11,512,500	1,919	N/A	N/A	400 SF per space	11,512,500
Site Landscaping, paving, etc			\$2,000,000	\$2,000,000				Allowance	2,000,000
Sub Total									\$280,512,500

SOFT COSTS	Percent of Cost	Applicable Cost Item	Cost Item Amount	Total Soft Cost	Fixed Fee Allowance	COMMENTS	COST TO PROJECT
Design and Engineering	7.00%	All but acq & relocation	\$404,414,300	\$28,309,001	\$3,000,000		\$28,309,001
Legal Fees					250,000		3,000,000
21E Study					500,000		250,000
Permitting & EIR					2,000,000		500,000
Impact Mitigation Costs					\$1,000,000		2,000,000
Other Professional Services	3.00%	All	476,104,205	14,283,126			1,000,000
Project Administration	3.00%	All	\$490,387,331	\$14,711,620			14,283,126
Financing Fees							14,711,620
Sub Total							\$64,053,747

**TABLE 5
COST TO ACQUIRE SITE AND RELOCATE BUSINESSES**

	C STREET		NORTHERN AVENUE	
	Square Feet	COST	Square Feet	COST
Property Acquisition				
Private Property Acquisition	1,212,358	\$26,443,540	216,775	6,030,970
State Property Opportunity Cost	27,490	540,800	662,146	12,812,366
City Property Acquisition	0	0	301,514	10,465,659
Federal Property Acquisition	0	0	136,587	4,394,500
Sub Total	1,239,848	26,984,340	1,317,022	33,703,495
Business Relocation	271,800	1,421,750	531,873	2,927,410
Total Site Acquisition and Relocation Cost		\$28,406,090		\$36,630,904

**TABLE 6
BUSINESS IMPACT COMPARISON**

	C STREET			NORTHERN AVENUE		
	Maritime	Non-maritime	Total	Maritime	Non-maritime	Total
DISPLACED JOBS	149	135	284	280	572	852
NUMBER OF RELOCATED BUSINESSES	5	9	14	13	26	39
BUILDING SQUARE FEET TO RELOCATE	96,180	179,536	275,716	162,326	476,472	638,798
VALUE OF BUILDINGS DEMOLISHED	\$374,000	\$2,624,000	\$2,998,000	\$3,758,070	\$8,410,820	\$12,168,890

Appendix 4

Cost Benefit Analysis

This section presents the results of the market and economic analysis, and development cost estimates detailed in the previous three appendices in the form of a pro-forma for the construction period and the first 25 years of operation of the facility after completion.

The first four tables summarize the total annual attendance and spending (Table 1); the total annual economic impact (Table 2); the annual total fiscal benefits (Table 3); and annual operating costs (Table 4) for a new exposition center with 550,000 gross square feet of exhibition space independent of a specific site. The final two tables describe the economic performance of the site specific facilities, comparing the annual net fiscal impacts of a generic exposition center (Table 3) to the net operating deficit, including debt service, for the facility at C-Street (Table 5) and Northern Avenue (Table 6) based on the different development costs of the two sites.

While it is clear that the construction of a new exposition center will bring substantial economic benefit to the Commonwealth over the long term, the total development cost has an impact on the economic performance of the facility through the first 25 years of operation.

As a result of the development cost difference between the two sites being considered, a facility at C Street is expected to break even in the year 2009, three years earlier than the same facility sited at Northern Avenue

**TABLE I
ANNUAL ATTENDANCE AND SPENDING (\$000's)**

	Assumptions	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1996-2010																
Convention and Trade Show Attendees																
Overnight Visitors	70%	0	0	0	0	111,340	141,210	151,660	162,720	174,412	186,809	199,898	213,736	228,360	243,813	260,136
Regional Attendees	30%	0	0	0	0	56,292	60,523	65,001	69,741	74,756	80,061	85,671	91,601	97,869	104,491	111,487
Total Attendees (excl. consumer shows)		0	0	0	0	187,641	201,742	216,670	232,470	249,188	266,870	285,569	305,337	326,229	348,304	371,623
Spending by Attendees																
Hotel Lodging	\$ Visitor	\$0	\$0	\$0	\$0	\$58,273	\$65,785	\$74,185	\$83,574	\$94,064	\$105,775	\$118,846	\$133,427	\$149,684	\$167,803	\$187,990
Hotel Restaurant	\$ Regnl	\$0	\$0	\$0	\$0	\$15,262	\$17,210	\$19,430	\$21,889	\$24,636	\$27,704	\$31,127	\$34,946	\$39,204	\$43,949	\$49,237
Other Restaurant		0	0	0	0	15,816	17,855	20,135	22,684	25,531	28,710	32,257	36,215	40,627	45,545	51,024
Hospitality Suites		0	0	0	0	7,214	8,144	9,184	10,346	11,645	13,095	14,713	16,518	18,511	20,774	23,273
Entertainment		0	0	0	0	6,938	7,832	8,832	9,950	11,199	12,594	14,150	15,886	17,821	19,979	22,382
Retail		0	0	0	0	11,377	12,844	14,484	16,317	18,365	20,652	23,204	26,050	29,224	32,762	36,703
Local Transportation		0	0	0	0	5,967	6,736	7,596	8,557	9,631	10,831	12,169	13,662	15,326	17,182	19,249
Other		0	0	0	0	5,411	6,108	6,888	7,760	8,734	9,821	11,035	12,388	13,898	15,580	17,455
Total Spending by Attendees		0	0	0	0	126,260	142,530	160,730	181,080	203,810	229,180	257,500	289,090	324,320	363,570	407,310

TABLE I (Continue)

	Assumptions	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
2011-2025																
Convention and Trade Show Attendees																
Overnight Visitors	70%	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136	260,136
Regional Attendees	30%	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487	111,487
Total Attendees (excl. consumer shows)		371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623	371,623
Spending by Attendees																
Hotel Lodging	\$ Visitor	197,389	207,259	217,622	228,503	239,928	251,924	264,520	277,747	291,634	306,216	321,526	337,603	354,483	372,207	390,817
Hotel Restaurant	\$ Regnl	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Restaurant		51,698	54,283	56,997	59,847	62,840	65,982	69,281	72,745	76,382	80,201	84,211	88,422	92,841	97,485	102,359
Hospitality Suites		53,576	56,254	59,067	62,020	65,121	68,378	71,796	75,386	79,156	83,113	87,269	91,632	96,214	101,025	106,076
Entertainment		24,436	25,658	26,941	28,288	29,703	31,188	32,747	34,384	36,104	37,909	39,804	41,795	43,884	46,078	48,382
Retail		21,501	21,676	21,910	22,205	22,566	22,994	23,494	24,068	24,722	25,458	26,281	27,195	28,204	29,315	30,530
Local Transportation		38,538	40,465	42,488	44,613	46,844	49,186	51,645	54,227	56,939	59,786	62,775	65,914	69,299	72,930	76,803
Other		20,211	21,222	22,283	23,397	24,567	25,795	27,085	28,439	29,861	31,354	32,922	34,568	36,296	38,111	40,016
Total Spending by Attendees		427,680	449,060	471,510	495,090	519,840	545,840	573,130	601,780	631,870	663,470	696,640	731,470	768,050	806,450	846,770

NOTES

- Attendance estimates are based upon a conservative period of ten years from opening required to attain stabilized occupancy
- Average duration of visitor stay is 3.2 nights
- Regional attendees spend nothing on hotel rooms and \$600 as much as visitors on all other categories
- Inflation is assumed to be 3% a through the year 2000 and 5% thereafter

TABLE 2

ANNUAL ECONOMIC IMPACT (\$000's)

1996-2010	Assumptions	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Off Site Impact																
Number of Jobs Created		0	0	0	0	3,049	3,348	3,647	3,946	4,245	4,544	4,843	5,142	5,441	5,740	6,039
New Earnings	\$19,883 / job	0	0	0	0	72,385	83,457	95,456	108,446	122,497	137,681	154,078	171,770	190,846	211,400	233,532
Total Output	1.9631 multiplier	0	0	0	0	231,110	260,890	294,204	331,454	373,060	419,497	471,335	529,158	593,645	665,488	745,551
On Site Impact																
Number of Jobs Created		2,215	2,215	2,215	2,215	478	484	490	496	502	508	513	519	525	531	537
New Earnings - Direct On Site	\$20,197 / job	0	0	0	0	5,950	7,012	7,362	7,730	8,117	8,523	8,949	9,396	9,866	10,359	10,877
New Earnings - Indirect	\$20,189 / job	0	0	0	0	6,778	6,620	7,079	7,574	8,110	8,691	9,320	10,001	10,740	11,543	12,414
New Earnings - Facility Construction	\$28,817 / job	63,816	65,730	67,702	69,733	0	0	0	0	0	0	0	0	0	0	0
Total New Earnings		63,816	65,730	67,702	69,733	12,728	13,632	14,441	15,304	16,227	17,213	18,268	19,397	20,606	21,902	23,292
Total Output	1.9709 multiplier	200,336	206,346	212,537	218,911	38,090	40,373	42,813	45,421	48,212	51,200	54,401	57,833	61,515	65,467	69,712
Hotel Construction Impact																
Number of New Rooms Developed		412	412	412	412	161	161	161	161	161	161	161	161	161	161	161
Number of Jobs Created		845	845	845	845	330	330	330	330	330	330	330	330	330	330	330
New Earnings	\$32,022 / job	27,066	27,878	28,714	29,575	11,911	12,507	13,132	13,789	14,478	15,202	15,962	16,761	17,599	18,479	19,400
Total Output	See note below	67,024	69,022	71,080	73,199	29,498	30,964	32,504	34,120	35,818	37,600	39,472	41,437	43,500	45,666	47,936

Total Economic Impact																
Total Jobs Created		1,060	1,060	3,060	3,060	1,857	4,162	4,467	4,772	5,077	5,382	5,687	5,992	6,297	6,602	6,907
Total New Earnings		90,882	93,608	96,416	99,309	97,024	109,596	123,029	137,540	153,202	170,097	188,308	207,927	229,051	251,781	256,824
Total Output		267,361	275,369	283,616	292,112	298,697	332,227	369,520	410,996	457,090	508,298	565,208	628,428	698,659	776,621	815,263

TABLE 2 (Continue)

2011-2025	Assumptions	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Off Site Impact																
Number of Jobs Created		6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039	6,039
New Earnings	\$41,316 / job	245,209	257,469	270,341	283,860	298,053	312,956	328,603	345,034	362,285	380,400	399,420	419,301	440,360	462,378	485,497
Total Output	1.9611 multiplier	782,818	821,972	861,164	906,227	951,529	999,121	1,049,071	1,101,514	1,156,592	1,214,414	1,275,149	1,338,993	1,405,860	1,476,149	1,549,951
On Site Impact																
Number of Jobs Created		537	537	537	537	537	537	537	537	537	537	537	537	537	537	537
New Earnings - Direct On Site	\$20,197 / job	11,421	11,992	12,592	13,221	13,882	14,577	15,305	16,071	16,874	17,718	18,604	19,534	20,511	21,536	22,613
New Earnings - Indirect	\$20,189 / job	13,015	13,687	14,371	15,090	15,844	16,636	17,468	18,342	19,259	20,222	21,233	22,294	23,409	24,580	25,809
New Earnings - Facility Construction	\$0 / job	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Earnings		24,436	25,679	26,963	28,311	29,727	31,213	32,774	34,412	36,133	37,940	39,837	41,828	43,920	46,116	48,422
Total Output	1.9709 multiplier	71,197	76,857	80,700	84,735	88,972	93,420	98,091	102,996	108,146	113,553	119,231	125,192	131,452	138,024	144,926
Hotel Construction Impact																
Number of New Rooms Developed		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Jobs Created		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Earnings	\$32,022 / job	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Output	See note below	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total Economic Impact																
Total Jobs Created		6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576	6,576
Total New Earnings		269,665	283,148	297,306	312,171	327,780	344,169	361,377	379,446	398,418	418,339	439,256	461,219	484,280	508,494	533,919
Total Output		856,015	898,829	943,764	990,962	1,040,501	1,092,542	1,147,165	1,204,510	1,264,738	1,327,987	1,394,380	1,464,095	1,537,312	1,614,173	1,694,877

NOTES

- Onsite economic impact includes direct spending to operate the facility, spending by suppliers of goods and services, and construction impact
- Hotel construction assumes development of the additional 1,258 rooms in the metropolitan area which will be required to service the visitors
- Multipliers for output during facility and hotel construction periods are 2.1753 for hotel costs and 2.1181 for applicable soft costs

TABLE 3

ANNUAL FISCAL BENEFITS (\$000's)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1996-2010															
Direct Off Site Taxes from Spending															
Room Occupancy Tax - Cities & Towns	0	0	0	0	2,610	2,957	3,335	3,757	4,228	4,755	5,342	5,998	6,729	7,543	8,451
Room Occupancy Tax - State	0	0	0	0	3,733	4,214	4,752	5,353	6,025	6,776	7,613	8,547	9,588	10,749	12,042
Meals Tax	0	0	0	0	1,554	1,754	1,978	2,229	2,508	2,821	3,169	3,558	3,992	4,475	5,013
Sales Tax	0	0	0	0	560	642	724	816	918	1,031	1,160	1,301	1,461	1,638	1,835
Total Direct Off Site Tax Revenue	0	0	0	0	8,475	9,568	10,789	12,155	13,680	15,383	17,285	19,405	21,770	24,405	27,341
Indirect Off Site Taxes															
Income Tax	0	0	0	0	1,480	4,022	4,601	5,227	5,904	6,616	7,426	8,278	9,108	10,188	11,255
Corporate Tax	0	0	0	0	818	943	1,079	1,226	1,385	1,556	1,742	1,942	2,157	2,390	2,640
Sales Tax	0	0	0	0	829	956	1,093	1,242	1,403	1,576	1,764	1,967	2,185	2,421	2,674
Total Indirect Off Site Tax Revenue	0	0	0	0	5,136	5,921	6,773	7,694	8,691	9,768	10,932	12,187	13,540	14,999	16,569
On Site Taxes - Direct & Indirect															
Income Tax	3,263	3,161	3,462	3,565	556	589	625	663	704	747	794	844	898	956	1,018
Corporate Tax	792	788	812	836	77	75	80	86	92	98	105	113	121	130	140
Sales Tax	775	798	822	847	132	140	148	158	167	178	189	201	213	227	242
Total On Site Taxes	4,830	4,947	5,096	5,249	765	804	853	906	963	1,023	1,088	1,158	1,233	1,313	1,400
Hotel Construction Period Taxes															
Income Tax	1,301	1,342	1,382	1,421	573	602	632	664	697	732	768	807	847	889	0
Corporate Tax	306	315	324	334	135	141	148	156	164	172	180	189	199	209	0
Sales Tax	692	713	735	757	305	320	336	353	370	389	408	429	450	473	0
Total Hotel Construction Taxes	2,301	2,370	2,441	2,514	1,013	1,063	1,116	1,172	1,231	1,292	1,357	1,425	1,496	1,571	0
TOTAL FISCAL IMPACT	7,110	7,317	7,536	7,763	15,388	17,356	19,532	21,927	24,565	27,468	30,661	34,175	38,039	42,287	45,309

TABLE 3 (Continue)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
2011-2025															
Direct Off Site Taxes from Spending															
Room Occupancy Tax - Cities & Towns	8,871	9,117	9,783	10,272	10,785	11,324	11,891	12,485	13,110	13,765	14,453	15,176	15,935	16,711	17,568
Room Occupancy Tax - State	12,644	13,276	13,940	14,617	15,309	16,117	16,944	17,791	18,681	19,615	20,596	21,626	22,707	23,842	25,034
Meals Tax	5,264	5,527	5,801	6,093	6,398	6,718	7,054	7,407	7,777	8,166	8,574	9,003	9,453	9,925	10,422
Sales Tax	1,927	2,023	2,124	2,231	2,342	2,459	2,582	2,711	2,847	2,989	3,139	3,296	3,460	3,633	3,815
Total Direct Off Site Tax Revenue	28,708	30,143	31,650	33,233	34,894	36,639	38,471	40,395	42,414	44,535	46,762	49,100	51,555	54,133	56,819
Indirect Off Site Taxes															
Income Tax	11,818	12,409	13,029	13,681	14,365	15,081	15,837	16,629	17,460	18,331	19,250	20,211	21,223	22,284	23,399
Corporate Tax	2,772	2,910	3,056	3,209	3,369	3,538	3,715	3,900	4,095	4,300	4,515	4,741	4,978	5,227	5,488
Sales Tax	2,808	2,948	3,095	3,250	3,413	3,583	3,763	3,951	4,148	4,356	4,573	4,802	5,042	5,294	5,559
Total Indirect Off Site Tax Revenue	17,397	18,267	19,181	20,140	21,147	22,204	23,314	24,480	25,704	26,989	28,338	29,755	31,243	32,805	34,446
On Site Taxes - Direct & Indirect															
Income Tax	1,069	1,122	1,178	1,237	1,299	1,364	1,432	1,504	1,579	1,658	1,741	1,828	1,919	2,015	2,116
Corporate Tax	147	155	162	171	179	188	197	207	218	229	240	252	265	278	292
Sales Tax	254	267	280	294	309	324	340	357	375	394	414	434	456	479	503
Total On Site Taxes	1,470	1,541	1,620	1,701	1,786	1,876	1,970	2,068	2,171	2,280	2,394	2,514	2,639	2,771	2,910
Hotel Construction Period Taxes															
Income Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corporate Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hotel Construction Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL FISCAL IMPACT	47,575	49,054	52,451	55,074	57,827	60,719	63,755	66,942	70,290	73,804	77,494	81,369	85,437	89,709	94,195

NOTES

- All fiscal benefits are based on existing tax structure and assume no new taxes
- Room Occupancy Taxes for Cities and Towns is earned by all metropolitan area municipalities which provide hotel rooms
- For explanation of income, corporate, and sales tax calculations, see exhibit entitled "Estimating Total Economic Impact Using regional Multipliers"

**TABLE 4
ANNUAL OPERATING COSTS (\$000's)**

	Assumptions	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Occupancy																
Occupied Sq Ft Days Conventions	550,000 Sq Ft	0	0	0	0	46,450	49,941	53,636	57,547	61,686	66,063	70,692	75,585	80,757	86,223	91,994
Consumer Shows	15.0% occupancy	0	0	0	0	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400
Total Occupied Sq Ft Days (OSFD)		0	0	0	0	72,850	76,341	80,036	83,947	88,086	92,463	97,092	101,985	107,157	112,623	118,394
Occupancy Rate	320 days/yr	0%	0%	0%	0%	41%	43%	45%	48%	50%	53%	55%	58%	61%	64%	67%
Operating Income	1994 \$															
Rent Conventions/Shows	\$0.045 /OSFD	\$0	\$0	\$0	\$0	\$3,955	\$4,352	\$4,790	\$5,276	\$5,813	\$6,406	\$7,064	\$7,790	\$8,595	\$9,485	\$10,469
Event Services	\$0.039 /OSFD	0	0	0	0	3,392	3,732	4,108	4,524	4,985	5,494	6,057	6,681	7,371	8,134	8,978
F & B Commissions Exposition	\$0.023 /OSFD	0	0	0	0	2,024	2,227	2,451	2,700	2,975	3,279	3,615	3,987	4,398	4,854	5,358
Parking	\$0.006 /OSFD	0	0	0	0	528	581	639	704	776	855	943	1,040	1,147	1,266	1,397
Rent from Support Space	\$7.00 /100,000	0	0	0	0	836	857	878	900	923	946	969	994	1,018	1,044	1,070
Other	5.0%	0	0	0	0	495	545	599	660	727	802	884	975	1,076	1,187	1,310
Total Operating Revenue		0	0	0	0	11,229	12,292	13,467	14,764	16,197	17,781	19,532	21,466	23,605	25,969	28,583
Operating Expenses - Fixed	\$23.61 /SF	0	0	0	0	(15,505)	(16,281)	(17,095)	(17,949)	(18,847)	(19,789)	(20,779)	(21,818)	(22,909)	(24,054)	(25,257)
- Variable	\$14.05 /SF	0	0	0	0	(3,821)	(4,204)	(4,628)	(5,096)	(5,615)	(6,189)	(6,824)	(7,526)	(8,303)	(9,163)	(10,114)
Net Operating Income (Loss)		0	0	0	0	(8,097)	(8,192)	(8,256)	(8,282)	(8,265)	(8,197)	(8,071)	(7,877)	(7,607)	(7,247)	(6,788)

TABLE 4 (Continue)

	Assumptions	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Occupancy																
Occupied Sq Ft Days Conventions	550,000 Sq Ft	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994	91,994
Consumer Shows	15.0% occupancy	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400	26,400
Total Occupied Sq Ft Days (OSFD)		118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394	118,394
Occupancy Rate	320 days/yr	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%
Operating Income	1994 \$															
Rent Conventions/Shows	\$0.045 /OSFD	10,993	11,543	12,120	12,726	13,362	14,030	14,732	15,468	16,242	17,054	17,906	18,802	19,742	20,729	21,765
Event Services	\$0.039 /OSFD	9,427	9,808	10,193	10,913	11,459	12,032	12,633	13,265	13,928	14,625	15,356	16,124	16,930	17,776	18,665
F & B Commissions Exposition	\$0.023 /OSFD	5,626	5,907	6,202	6,512	6,838	7,180	7,539	7,916	8,312	8,727	9,164	9,622	10,103	10,608	11,138
Parking	\$0.006 /OSFD	1,467	1,540	1,617	1,698	1,783	1,872	1,966	2,064	2,167	2,276	2,390	2,509	2,635	2,766	2,905
Rent from Support Space	\$7.00 /100,000	1,097	1,124	1,152	1,181	1,211	1,241	1,272	1,304	1,336	1,370	1,404	1,439	1,475	1,512	1,550
Other	5.0%	1,376	1,411	1,517	1,592	1,672	1,756	1,843	1,936	2,032	2,134	2,241	2,351	2,470	2,594	2,724
Total Operating Revenue		29,985	31,457	33,002	34,623	36,324	38,110	39,985	41,952	44,017	46,185	48,460	50,848	53,354	55,985	58,747
Operating Expenses - Fixed	\$23.61 /SF	(26,520)	(27,846)	(29,238)	(30,700)	(32,235)	(33,846)	(35,539)	(37,316)	(39,182)	(41,141)	(43,198)	(45,357)	(47,625)	(50,007)	(52,507)
- Variable	\$14.05 /SF	(10,619)	(11,150)	(11,708)	(12,293)	(12,908)	(13,553)	(14,231)	(14,943)	(15,690)	(16,474)	(17,298)	(18,163)	(19,071)	(20,025)	(21,026)
Net Operating Income (Loss)		(7,154)	(7,539)	(7,944)	(8,370)	(8,818)	(9,289)	(9,785)	(10,306)	(10,854)	(11,410)	(12,036)	(12,673)	(13,342)	(14,046)	(14,786)

NOTES

- Consumer Shows provide additional operating revenue, but do not affect incremental spending and fiscal benefits
- Allowing sufficient time for change over, 60% - 70% is generally considered to be maximum occupancy
- Operating revenues and expenses are based upon the February, 1993 Feasibility Analysis performed by Coopers & Lybrand
- Rent from Support Space represents net income from a 100,000 SF portion of the facility leased for restaurants, shops, and entertainment
- The breakdown of fixed vs. variable operating expenses is based upon IIRX estimates

**TABLE 5
ANNUAL ECONOMIC PERFORMANCE FOR C-STREET FACILITY (\$000's)**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1996-2010															
Assumptions (From Table 4)	0	0	0	0	(8,097)	(8,192)	(8,256)	(8,282)	(8,265)	(8,197)	(8,071)	(7,877)	(7,607)	(7,247)	(6,788)
Net Operating Income (Loss)															
Financing															
Debt Service (Principal)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)	(35,584)
Terms (Rate, Term)	23.001	15.334	10.223	5.111	0	0	0	0	0	0	0	0	0	0	0
Interest Income	(512,582)	(520,249)	(525,361)	(510,472)	(543,681)	(543,776)	(543,839)	(543,865)	(543,848)	(543,780)	(543,654)	(543,461)	(543,190)	(542,831)	(542,371)
NET INCOME (LOSS)															

TOTAL FISCAL IMPACT	\$7,130	\$7,117	\$7,536	\$7,763	\$15,388	\$17,356	\$19,532	\$21,927	\$24,565	\$27,468	\$30,661	\$34,175	\$38,039	\$42,287	\$45,309
NET INCOME (LOSS)	(\$12,582)	(\$20,249)	(\$25,361)	(\$30,472)	(\$43,681)	(\$43,776)	(\$43,839)	(\$43,865)	(\$43,848)	(\$43,780)	(\$43,654)	(\$43,461)	(\$43,190)	(\$42,831)	(\$42,371)
NET ECONOMIC IMPACT	(\$5,452)	(\$12,932)	(\$17,824)	(\$22,710)	(\$28,293)	(\$26,420)	(\$24,308)	(\$21,938)	(\$19,283)	(\$16,313)	(\$12,993)	(\$9,286)	(\$5,152)	(\$544)	\$2,938

TABLE 5 (Continue)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
2011-2025															
Assumptions (From Table 4)	(7,154)	(7,539)	(7,944)	(8,370)	(8,818)	(9,289)	(9,785)	(10,306)	(10,854)	(11,410)	(12,036)	(12,671)	(13,342)	(14,046)	(14,786)
Net Operating Income (Loss)															
Financing															
Debt Service (Principal)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)	(15,584)
Terms (Rate, Term)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Income	(42,738)	(43,123)	(43,528)	(43,954)	(44,402)	(44,873)	(45,368)	(45,890)	(46,437)	(47,013)	(47,619)	(48,256)	(48,926)	(49,630)	(50,370)
NET INCOME (LOSS)															

TOTAL FISCAL IMPACT	47,575	49,954	52,451	55,074	57,827	60,719	63,755	66,942	70,290	73,804	77,494	81,369	85,437	89,709	94,195
NET INCOME (LOSS)	(42,738)	(43,123)	(43,528)	(43,954)	(44,402)	(44,873)	(45,368)	(45,890)	(46,437)	(47,013)	(47,619)	(48,256)	(48,926)	(49,630)	(50,370)
NET ECONOMIC IMPACT	4,837	6,831	8,923	11,120	13,426	15,846	18,386	21,053	23,852	26,791	29,875	33,113	36,512	40,080	43,825

NOTES

- Financing assumes a 30 year general obligation bond issued by the Commonwealth at a 6.5% yield. If a revenue bond were issued, debt service payments could be scheduled to better reflect the facility construction and lease up periods. The principal amount of the debt equals the estimated development cost at the C Street site inflated for two years.
- Interest income is earned on the unspent portion of development funds and is based upon a negative arbitrage of 1%.

**TABLE 6
ANNUAL ECONOMIC PERFORMANCE FOR NORTTIERN AVENUE FACILITY (\$000's)**

1996-2010	Assumptions (From Table 4)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Net Operating Income (Loss)		0	0	0	0	(8,097)	(8,192)	(8,256)	(8,282)	(8,265)	(8,197)	(8,071)	(7,877)	(7,607)	(7,247)	(6,788)
Financing																
Debt Service (Principal)	\$589.4 million	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)
Terms (Rate, Term)	6 50%															
Interest Income	5 50% /year	29,177	19,451	12,968	6,484	0	0	0	0	0	0	0	0	0	0	0
NET INCOME (LOSS)		(\$15,960)	(\$25,686)	(\$32,170)	(\$38,654)	(\$53,235)	(\$53,330)	(\$53,393)	(\$53,419)	(\$53,402)	(\$53,334)	(\$53,208)	(\$53,015)	(\$52,744)	(\$52,385)	(\$51,925)

TOTAL FISCAL IMPACT	(From Table 1)	\$7,110	\$7,317	\$7,536	\$7,763	\$15,388	\$17,356	\$19,532	\$21,927	\$24,565	\$27,468	\$30,661	\$34,175	\$38,019	\$42,287	\$45,109
NET INCOME (LOSS)		(\$15,960)	(\$25,686)	(\$32,170)	(\$38,654)	(\$53,235)	(\$53,330)	(\$53,393)	(\$53,419)	(\$53,402)	(\$53,334)	(\$53,208)	(\$53,015)	(\$52,744)	(\$52,385)	(\$51,925)
NET ECONOMIC IMPACT		(\$8,830)	(\$18,369)	(\$24,633)	(\$30,891)	(\$37,847)	(\$35,974)	(\$33,862)	(\$31,492)	(\$28,837)	(\$25,867)	(\$22,547)	(\$18,840)	(\$14,706)	(\$10,098)	(\$6,616)

TABLE 6 (Continue)

2011-2025	Assumptions (From Table 4)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Net Operating Income (Loss)		(7,154)	(7,539)	(7,944)	(8,370)	(8,818)	(9,289)	(9,785)	(10,306)	(10,854)	(11,430)	(12,036)	(12,673)	(13,342)	(14,046)	(14,786)
Financing																
Debt Service (Principal)	\$589.4 million	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)	(45,138)
Terms (Rate, Term)	6 50%															
Interest Income	5 50% /year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET INCOME (LOSS)		(\$2,292)	(\$2,677)	(\$3,082)	(\$3,508)	(\$3,956)	(\$4,427)	(\$4,922)	(\$5,443)	(\$5,991)	(\$6,567)	(\$7,173)	(\$7,810)	(\$8,480)	(\$9,184)	(\$9,924)

TOTAL FISCAL IMPACT	(From Table 1)	47,575	49,954	52,451	55,074	57,827	60,719	63,755	66,942	70,290	73,804	77,494	81,369	85,437	89,709	94,195
NET INCOME (LOSS)		(\$2,292)	(\$2,677)	(\$3,082)	(\$3,508)	(\$3,956)	(\$4,427)	(\$4,922)	(\$5,443)	(\$5,991)	(\$6,567)	(\$7,173)	(\$7,810)	(\$8,480)	(\$9,184)	(\$9,924)
NET ECONOMIC IMPACT		(4,717)	(2,723)	(630)	1,566	3,872	6,292	8,832	11,499	14,298	17,237	20,321	23,559	26,958	30,526	34,271

NOTES

- Financing assumes a 30 year general obligation bond issued by the Commonwealth at a 6.5% yield. If a revenue bond were issued, debt service payments could be scheduled to better reflect the facility construction and lease up periods. The principal amount of the debt equals the estimated development cost at the C Street site, inflated for two years.
- Interest income is earned on the unspent portion of development funds and is based upon a negative arbitrage of 1%.

APPENDIX V

HOTEL DEMAND FROM MAJOR EXPOSITION CENTER EVENTS

A new exposition center in Boston can be expected to bring additional convention and meeting visitors to the city and create additional demand for hotel, meals, retail sales, transportation, and other services in the city and metropolitan area. The greatest employment and fiscal benefits for Boston and Massachusetts will be those associated with hotel use. The most basic issues are: How many new hotel rooms might be developed within the city and the metropolitan area in response to increased demand from new conventions and trade shows?, and: How many additional room-sale nights will result?

Summary of Conclusions:

A new convention / exposition facility containing an exposition hall with about 550,000 g.s.f. of exhibition space could induce the development of up to 3,259 new hotel rooms in the Boston area by the year 2010.

The fiscal yield from likely scenarios could include \$4.9 million to \$8.1 million in property tax revenues (average of \$1,500 to \$2,500/room) if these new hotels were developed in Boston and were fully taxable (i.e.: not built on Massport land.). The total amounts of state and municipal hotel occupancy taxes were estimated and described in Appendix II.

Only a portion of the net increase in hotel business and of the municipal hotel occupancy taxes that exposition center visitors generate will go to the city of Boston. Most will go to other cities and towns in the metropolitan area. Boston may receive in the range of 27% to 63% of municipal hotel room occupancy taxes arising from trade show events taking place at Boston's new Exposition Center.

The hotel demand originating from events at the new Exposition Center will not only allow for the growth of the metropolitan area's hotel stock; it will require an increase in the number of available rooms. Large events held during popular months may absorb up to one third of the metropolitan area's rooms, forcing some business or tourist visitors to reschedule or otherwise change their plans.

Additional Demand for Hotel Rooms and New Hotel Development:

Attendance from national trade shows and related professional association gatherings (those drawing significant attendance from out of town for extended stays) was estimated at 187,641 visitors during year 2000, the first full year of operation, and 371,621 visitors by 2010, when operations stabilize at full capacity utilization, as described in Appendix I. An estimated 70% of these attendees will stay an average of 3.2 days in a Boston area hotel, as stated in Appendix II. With the average event drawing about 14,434 attendees, hotel demand for a typical large event will require $(14,434 \times 70\% =)$ 10,104 rooms each night over the entire 3.2 day period, generating 32,332 room-occupancy-nights of demand for each event. This would require 84% of Boston's current 11,966 hotel room supply, or 29% of the metropolitan area's hotel rooms (estimated at 35,000 by Smith Travel Research).

Total occupancy-days generated over the course of the year 2000 could support 1,646 hotel rooms at 70% annual occupancy if this demand were evenly distributed throughout the year. By year 2005 this theoretical maximum of hotel rooms supported by convention and trade show visitors would rise to 2,340; and by 2010, when operations stabilize at full utilization of exposition hall capacity, 3,259 hotel rooms could be supported by evenly distributed demand. (For example:

in year 2010 our $371,621 \times 0.70 \times 3.2 = 832,431$ hotel occupancy days of business, if evenly spread throughout the year, could support $(832,431 / (0.7 \times 365)) = 3,259$ hotel rooms at a favorable 70% occupancy rate.)

However, this demand for hotel rooms would not be evenly distributed throughout the year, and the development and utilization of hotel rooms will be influenced by the seasonality of demand and the position of Boston and its hotels in the regional market. In addition, the development of additional hotel stock will be influenced by the two general rules that: 1) no hotel may normally enjoy occupancy rates above 100% on any given day, and 2) all hotels must enjoy average annual occupancy rates of at least 65% to 70% over the long term if they are to prosper and stimulate further hotel development. Even if all new and existing hotels are full during large exposition events, additional rooms may so dilute baseline occupancy during other times that overall occupancy rates may fall below the acceptable annual average. These issues are illustrated in the following tables: *The Best Boston Can Do by Having Large Conventions in Slow Months* and *The Worst Boston Can Do by Having Large Conventions in Busy Months*.

The scenarios illustrated in the tables go like this:

Well in advance of a large event, blocks of rooms are reserved for event attendees. Even if all or most of them could arrange to stay in Boston hotels close to the Exposition Center, they would displace numerous tourists and business visitors who have not reserved rooms as far in advance. These "normal baseline demand market" guests of Boston hotels would have to find accommodations in neighboring communities. Even if every room in Boston is filled before this displacement and spillover process begins, Boston will enjoy only the additional business equal to the number of hotel rooms that would normally be empty on this particular day. All demand in excess of this number of normally empty rooms will benefit other metropolitan area hotels. Of course, some of these displaced tourists and business travelers may be able to reschedule their stay and find accommodations in Boston when rooms here become available again, but we cannot count on this.

Against this background, the illustrated scenarios envision the development of additional hotel rooms. These new hotels cannot all be built at once, and we have already seen that the demand generated by Exposition Center guests will also be phased in as operations at the exposition center mature to full capacity and stable operating level. So a (purely hypothetical) rational developer would want to build enough rooms so that each new hotel could experience acceptable annual occupancy (65% to 70%) if its performance equaled the market average. At the same time, city and state planners and event organizers will want to have an adequate supply of rooms to accommodate all potential visitors so that our city and region do not miss any opportunity to host all visitors at the place and time that these visitors desire.

RESULTS:

Boston is already an excellent candidate for the development of additional hotels, having enjoyed a 75% average occupancy rate in 1993, with still further growth in room sales over 1994. The tables reflect this baseline situation and examine "What If" 1,646 new rooms were built in Boston now, with baseline demand increased by the projected year 2000 Exposition Center business. All of this is detailed month by month, since monthly occupancy rates show strong seasonal variation. After listing baseline demand statistics such as monthly occupancy rates and the number of occupied and available rooms on an average night, the tables look for accommodations for new Exposition Center demand. "Spillover Demand" represents the number of additional rooms

needed after every "Available Room" in the city of Boston is filled. "Convention Demand Captured ... with 1,646 New Rooms" is the sum of Available Rooms from the current (1994) stock of rooms plus the 1,646 new rooms, all of which are presumed to fill. The "% Capture" is the portion of all 10,104 rooms needed by event visitors that come from the available supply in the city of Boston, including the 1,646 new rooms. Total room nights are then calculated, and a new occupancy rate results for the enlarged stock of hotel rooms in the city.

Actual results would be somewhere between "The Best We Can Do" and "The Worst...", but probably closer to The Worst because the events in question have the same seasonal patterns as baseline demand. With 1,646 new hotel rooms, Boston would capture between 1/4 and 2/3 of the net increase in room demand.

"The Worst..." scenario points out the limitations imposed by the current size of the Boston metropolitan hotel market. On a typical October day Boston's hotels will have just over 1,000 rooms available after normal baseline demand is satisfied. The 23,000 rooms in the rest of the metropolitan area might be around 85% full, leaving only 3,500 or so rooms there empty. Adding to this the 1,646 rooms to be built under this scenario provides a total of 6,146 rooms that would be available for Exposition Center attendees, requiring the displacement or rescheduling of nearly 4,000 baseline demand hotel guests if a highly attended "mega-event" were to occur during this most popular month. However, even in this worst case Boston's overall annual occupancy rate remains in the very healthy range of 69% to 71%, indicating room in the market for still further supply growth in the city. And in fact, further hotel expansion in other cities and towns in the metropolitan area is likely also.

The need for Exposition Center activity and occupancy to grow apace with area hotel supply can be an advantage rather than a problem. The market analysis presented in this report acknowledge the need for the Exposition Center to develop its trade show market over time. The simultaneous growth of baseline supply and demand for hotel and other visitor services, along with new supply and demand coming from the Exposition Center, will increase Boston's and Massachusetts' capacity to host other major events.

An important set of issues that this purely quantitative model cannot address involves the location, price point, and type of hotels to be developed in response to Exposition Center demand. These issues are important to the further planning for the Exposition Center. For example, Boston's Downtown/Back Bay hotels are booming, with occupancy rates averaging 76% in 1993, compared to 60% to 64% for Route 128 sub-markets. Sites near downtown or between downtown and the Exposition Center are clearly the most desirable because they are proximate to this existing healthy demand as well as close to the Exposition Center itself. However, luxury and higher priced hotels such as those that now dominate Boston's downtown may not be optimally attractive to exposition event visitors nor to the additional tourists and business visitors that convention hotels will have to attract in order to maintain adequate occupancy during off weeks when no major event is taking place.

update: 10/14/94 /JA

The Worst Boston Can Do by having Large Conventions in Busy Months:

Days	Occupancy Rate	Current Rooms 11,966	Available Rooms	Convention Demand		% Capture	Times Number Events	Added Room Nights (3.2 nights)	Baseline Room Nights	Total Room Nights	New Occupancy Rate
				Total Rooms 10,104	Captured for 3.2 days With 1,646 New Rooms						
Jan.	31	56%	6,713	5,253	0	0	0%		208,101	208,101	49%
Feb.	28	58%	6,904	5,062	0	0	0%		193,323	193,323	51%
March	31	67%	8,041	3,925	0	0	0%		249,276	249,276	59%
April	30	75%	8,975	2,992	0	0	0%		269,235	269,235	66%
May	31	80%	9,597	2,369	0	0	0%		297,499	297,499	71%
June	30	84%	9,992	1,974	8,130	3,620	36%	2 23,170	299,748	322,919	79%
July	31	82%	9,752	2,214	7,890	3,860	38%	2 24,702	302,321	327,023	77%
Aug.	31	88%	10,482	1,484	8,620	3,130	31%	3 30,046	324,949	354,995	84%
Sept.	30	88%	10,554	1,412	8,692	3,058	30%	3 29,357	316,620	345,977	85%
Oct.	31	92%	10,949	1,017	9,087	2,663	26%	3 25,566	339,416	364,981	86%
Nov.	30	77%	9,202	2,764	0	0	0%		276,056	276,056	68%
Dec.	31	53%	6,294	5,672	0	0	0%		195,118	195,118	46%
	365	75%					27%	132,841	3,271,660	3,404,501	69%

update: 10/12/94 /JA

The Best Boston Can Do by Having Large Conventions in Slow Months:

Days	Occupancy Rate	Current Rooms 11,966	Available Rooms	Convention Demand		% Capture	Times Number Events	Added Room Nights (3.2 nights)	Baseline Room Nights	Total Room Nights	New Occupancy Rate
				Total Rooms 10,104	Captured for 3.2 days With 1,646 New Rooms						
Jan.	31	56%	6,713	5,253	4,851	6,909	68%	3 66,327	208,101	274,428	65%
Feb.	28	58%	6,904	5,062	5,042	6,718	66%	3 64,489	193,323	257,812	68%
March	31	67%	8,041	3,925	6,179	5,581	55%	2 35,717	249,276	284,993	68%
April	30	75%	8,975	2,992	0	0	0%		269,235	269,235	66%
May	31	80%	9,597	2,369	0	0	0%		297,499	297,499	71%
June	30	84%	9,992	1,974	0	0	0%		299,748	299,748	73%
July	31	82%	9,752	2,214	0	0	0%		302,321	302,321	72%
Aug.	31	88%	10,482	1,484	0	0	0%		324,949	324,949	77%
Sept.	30	88%	10,554	1,412	0	0	0%		316,620	316,620	78%
Oct.	31	92%	10,949	1,017	0	0	0%		339,416	339,416	80%
Nov.	30	77%	9,202	2,764	7,340	4,420	44%	2 28,289	276,056	304,345	75%
Dec.	31	53%	6,294	5,672	4,432	7,328	73%	3 70,348	195,118	265,465	63%
	365	75%					63%	265,170	3,271,660	3,536,830	71%

Source: Occupancy rates from PKF Consulting and Pinnacle Advisory Group.
 Room stock estimates by Amatruda Assoc.
 Technique from Neptune Research.

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